



March 31, 1998

To the Board of Water Commissioners and Our Customers:

We are pleased to transmit the Annual Report of Denver Water for the year ended December 31, 1997

Responsibility for both the accuracy of the data, and the completeness and fairness of the presentation, including all disclosures, rests with Denver Water. To the best of our knowledge and belief, the enclosed data are accurate in all material respects and are reported in a manner designed to present fairly the financial position and results of operations of Denver Water. All disclosures necessary to enable the reader to gain an understanding of Denver Water's financial and operational activities have been included.

This report is presented in three sections as follows:

- 1. Introductory Section, which includes this transmittal letter, excerpts from the charter, organization chart, and list of principal officials.
- 2. Financial Section, which includes the financial statements and supplementary property and bond schedules, as well as the auditor's report on the financial statements and schedules.
- 3. Statistical Section, which includes selected operational and financial information, generally presented on a multi-year basis.

The Reporting Entity

The privately owned Denver City Water Company was organized in November 1870. It was merged into the Denver Union Water Company in October 1894, along with several smaller companies serving various parts of a growing Denver. In November 1918, the newly-formed five-member governing board of the Denver Water Department purchased the company for the citizens of the City and County of Denver ("City"), and set it up as an independent City water agency, with the philosophy that it would be operated as a business and remain apart from political influences. Denver Water is governed by a five-member board appointed by the Mayor of the City for overlapping six-year terms. Denver Water has complete charge and control of a water works system and plant which supplies water to customers located within the City and to entities serving other customers located in certain outlying areas in the Denver metropolitan area. In accordance with Governmental Accounting Standards Board Statement No. 14, "The Financial Reporting Entity," Denver Water is classified as an "other stand-alone government" since Denver Water is a legally distinct and separate entity from the City under the Charter of the City, and the City is not financially accountable for Denver Water. However, the City has elected to include Denver Water's financial statements in the City's general purpose financial statements as a component unit enterprise fund because, in the City's opinion, the nature and significance of Denver Water's relationship with the City are such that exclusion would cause the City's financial statements to be misleading or incomplete.

The Mission of Denver Water is as follows:

Denver Water will provide our customers with high quality water and excellent service through responsible and creative stewardship of the assets we manage. We will do this with a productive and diverse work force. We will actively participate in and be a responsible member of the water community.

The Year 1997 In Review

Positioning Denver Water for continued service into the 21st century highlighted activities during the course of the year. Purchase of the historic Moffat Water Tunnel assured future use of this key facility. Agreements with South Adams County for the county's relief from water quality problems in exchange for water storage, and a change in the water supply for operation of Public Service Company's Cherokee Power Plant from the South Platte River to recycled water were other highlights the year. Negotiations designed to keep Denver's South Platte River water rights intact were still another feature of a very active 1997.

An act of the legislature allowing the sale of the Moffat Water Tunnel to Denver Water resulted in an agreement for the purchase of this key facility for \$7 million. Under the agreement, 90% of this amount, (\$6.3 million) is returned to the City and County of Denver whose taxpayers provided 90% of the funding to build the tunnel. The city, in turn, is allocating \$3.3 million dollars to convert the irrigation systems of parks to non-potable sources, relieving some summer demand on the treated water system.

Long standing concerns over the quality of underground water sources in the north suburban area served by the South Adams County Water and Sanitation District have been resolved with an agreement between the District, the U.S. Army and Denver Water. The suburban district is paying \$22.9 million in tap fees to Denver Water for 4,000 acre-feet of treated water a year. As a part of the agreement, Adams County will obtain permits for, construct and turn over to Denver Water, storage for 8,000 acre-feet of water in gravel pits along the South Platte River downstream of Denver. Denver Water will realize a yield of 5,000 acre-feet from this source, resulting in 1,000 acre-feet a year gain in system yield. This cooperative arrangement is consistent with provisions of Denver Water's Integrated Resources Plan (IRP), which suggests co-operative ventures with other water suppliers so long as there is a net benefit to the Denver system. The U.S. Army entered the agreement by providing for the transfer of water for the Rocky Mountain Arsenal Wildlife Refuge from the High Line Canal to non-potable recycled water in the future. The agreements are expected to be finalized in 1998.

An agreement with Public Service Company for the use of recycled water for cooling at the Cherokee Power Plant reduces demand for water from the South Platte River. Non-potable recycled water is beginning to play an increasing role in meeting summertime demands with this and other agreements for the use of recycled water at the Park Hill Golf Course and in the development of the Gateway complex adjacent to Denver International Airport as well as at the redeveloped Lowry site and Stapleton airport.

Following announcement by the U.S Forest Service that it planned to study the South Platte River, upstream of Denver, for purposes of designating river segments as "Wild and Scenic", Denver Water began development of an alternative plan that would protect environmental features of the South Platte without endangering Denver's ability to use its water rights to supply a growing community. "Wild and Scenic" designation could interfere with the city's right to use water it owns in the South Platte. Denver Water's "South Platte Protection Plan", offered as an alternative by water utilities throughout Metro Denver to a Wild and Scenic designation, is the product of 46 meetings with some 75 public and private groups including federal, state and county agencies, water providers, property owners along the South Platte, and environmental and recreation groups. A key feature of Denver's plan would be the relinquishment of rights-of-way to build Two Forks Dam if suitable, on-line alternative water storage with yield equivalent to Two Forks can be developed. Other features of the plan include Denver's operation of the river to end sharp fluctuations of water levels, a commitment not to build facilities in Elevenmile or Cheesman Canyons, a \$1 million endowment for conservation projects and improved management of recreation areas along the river. The "South Platte Protection Plan" has been accepted for study as one of two alternatives to be considered in an Environmental Impact Statement, (EIS) by the Forest Service.

The expanding role of recycled water in meeting service area needs was also illustrated during the year with development of plans for the use of recycled water in the redevelopment of Lowry Air Force Base and Stapleton Airport. Until Denver is

able to construct and operate recycling facilities with capacity to serve this growing application, the possibility of the temporary use of the City of Aurora's Sand Creek recycling facility, which is near several of Denver's planned applications, is being considered. In the meantime, predesign contracts for a non-potable recycling facility were let during the year to Richard P. Arber & Associates, in conjunction with CH2M-Hill and Boyle Engineering. Phase 1 of this project is scheduled to be operational in 2001.

Significant progress was made during the year on the Federal Energy Regulatory Commission (FERC), relicensing of Gross Dam. The public involvement phase of this effort included seven meetings of the Recreation Work group, two meetings of the Aquatics Work Group, three general public meetings and a tour of the Gross Dam facilities. More than 430 people were involved in these meetings. FERC issued the original license for Gross Dam since generation of hydroelectric power was contemplated. Relicensing also envisions hydropower generation at Gross.

Although Denver Water was spared natural disasters such as the Buffalo Creek fire and flood of 1996, the long-term problems caused by these events continued throughout 1997. The scarred landscape still presents a serious threat to water quality. In the Spring Creek watershed alone, silt build-up amounts to 38,000 yards per mile along the 3.5-mile streambed. Because of a lingering lack of vegetation on slopes leading to the streambed another heavy precipitation incident could wash still more debris and silt into the river and streambed. Due to high levels of manganese found in the ash and silt from the fire, potassium permanganate is being added to water at Strontia Springs intakes to the Foothills Treatment Plant to begin clarification of water before it reaches the plant.

The year was also marked by efforts to improve water quality and lay the groundwork for a long-range upgrading of Denver Water's treatment plants. A \$5 million conduit which allows the Marston Treatment Plant to by-pass Marston Reservoir, when needed, and bring water directly into the plant from Conduit 20 and the South Platte River was completed during the year. It became operational in May, eliminating taste and odor problems associated with the fall" turn-over" of water in the reservoir. Also at Marston, construction was started during the year on a \$5.2 million treatment residue handling facility. As an added part of the treatment process, solid material extracted from the water will be de-watered and then taken to drying beds at the Foothills Plant, rather than returned to Marston Reservoir. Treatment plant upgrades are being driven by changes in the national Safe Drinking Water Act of 1996 and Denver Water's adherence to our own quality standards that exceed state and federal requirements.

For Transmission and Distribution crews, the Memorial Day weekend was shattered with the Friday, May 23 rupture of Conduit 94, a major link in the treated water distribution system. The 66-inch pipe broke near 56th Avenue and Cherokee Street, close to Interstate 25, spewing 25,000,000 gallons of water into the commercial area in some 40 minutes, flooding a furniture showroom and stranding one motorist on the top of his pick-up truck. The pipeline connects the 56th Avenue Pump Station with the Moffat Treatment Plant and is the major artery for moving water between these points. Damage claims have amounted to some \$700,000 and the Engineering Division has begun a survey of the condition of the entire length of the conduit installed in 1974. Repairs were completed in one week.

1997 financial performance reflected a surge in receipts from System Development Charges ("SDC"), brought about by the South Adams County agreement plus brisk treated water sales during a part of the summer. The board's approval of a 5% increase in SDCs beginning January 1, 1998 brought a flood of applications for taps and payment of fees in December in order to beat the January increase. A study of the revamping of the basis for SDC charges was launched in 1997 with recommendations scheduled to be delivered to the board in 1998.

Treated water consumption peaked on July 16 when customers used nearly 518 million gallons of water in a single day. 1991 was the last year in which water consumption had topped 500 million gallons a day (MGD). With a string of 98-degree days following in July, customers used 510 MGD on July 17 and 505 MGD on July 18. Earlier, customers had used 500 MGD on July 15. Temperatures rose above 90 degrees on 12 days during July. At year end, receipts from the sale of water stood at \$123 million, a \$7.5 million increase over the budgeted amount. SDC receipts were \$45.1 million, a staggering \$30.1 million increase over the budgeted amount, \$22.9 million was from the agreement with South Adams County.

Major capital expenditures for the year, in addition to the \$7 million invested in the purchase of the Moffat Water Tunnel, included \$2 million for a new outlet works at Antero reservoir, nearly \$5 million in the Marston Reservoir by-pass conduit, \$3.2 million in water main improvements, \$1.4 million in main replacements, \$1.5 million for vehicle and heavy

equipment replacement and \$.7 million for the rebuilding of Building 13 in the West Side yards, part of an on-going yard modernization. Operations and maintenance expenses included \$.7 million for the completion of repairs to the Roberts Tunnel hydro power facility, damaged in 1996 when debris found its way into plant piping and caused a flood of the facility.

Denver's 1997 precipitation was 3.33 inches above the 45-year average based on measurements at Stapleton, Edgewater, Lakewood, Cherry Creek Dam and the Kassler facility. For the entire year, customers used 75.3 billion gallons of water, some 2.6% above average.

Streamflow in the South Platte River basin upstream of Cheesman Reservoir was 6% above the long-term average, while natural flow into Dillon Reservoir on the western slope was 59% above the long-term average. Natural inflow to Williams Fork Reservoir was 57% above average in 1997.

The installation of natural gas powered engines to operate pumps at the Kendrick and 56th Avenue Pump Stations and Marston Plant, as a part of a comprehensive Energy Management Program, resulted in rebates of \$1.1 million from Public Service Company of Colorado. The units are designed to allow continued pumping of water during an electric power failure.

Negotiations with the City and County of Denver resulted in a change in the timing of the payment of the city's water bills for parks and other facilities. Formerly, the city paid its water bill once a year. Now the city, like most customers, is on a bimonthly schedule. This has resulted in a \$5 million increase in 1997 cash collections to Denver Water.

Denver's right to a second annual refill of Dillon Reservoir was greatly strengthened with a Water Court ruling affirming Denver's right to refill the reservoir. The court decision came after agreements were reached with some 50 interested parties. The result is considered vital to the most efficient operation of Denver's largest reservoir.

Denver Water continued its participation in a comprehensive Endangered Species Recovery Program on the Colorado and Platte rivers during the year. The program is designed to protect the habitats of the Piping Plover and Least Tern, two small birds, along the Platte River in Nebraska and several endangered fish species in sections of the Colorado River.

A survey of 500 Denver Water customers found 77% rated Denver's water quality as "Good or Excellent". Sixty-three percent expressed concern about contamination of water supplies while, 65% expressed an awareness of water quality problems elsewhere in the nation. Sixty-four percent of those queried said they trust Denver Water to protect water quality. Nearly 50% said they trusted the state Health Department to protect water quality, while less than 40% indicated they placed their trust in the EPA or Environmental Community to protect water quality.

Severn Trent PLC, a British utility giant, conducted an opinion survey of U.S. utility executives to determine those most highly thought of in the United States. Highest ranked in the U.S. was Duke Power Company of North Carolina. Denver Water tied for second with two others, Southern California Metro Water and Pacific Gas & Electric. Managers were asked to grade peer industries on accessibility and openness, leadership, customer services and quality management.

Denver's state-of-the-art Load Control Center, the nerve center from which the water system is operated by remote control, underwent upgrading and further modernization during the year. The computer-based SCADA, (Supervisory Control and Data Acquisition) system allows operators to fine-tune the delivery of water throughout the service area with the touch of a computer key. The Service Dispatcher, who responds to customer service calls and dispatches personnel responding to these calls, has moved into a position in the same room with transmission system operators for better communications and closer coordination of efforts. The new control center has access to dedicated Doppler Radar for real-time displays of actual weather conditions in the service area so adjustments can be made to the system in response to weather conditions.

At year end, Denver Water was serving over 1 million people through 207,889 direct connections to the system and another 63,449 connections through Master Meter water districts for a grand total of 271,338 accounts. Customer Representatives answered a total of 143,955 telephone calls from customers with questions about water bills, the leading topic of calls.

Denver Water's Conservation Plan was amended during the year to include the additional conservation goals of the Integrated Resources Plan (IRP) in its first year of implementation. The revised plan includes financial incentives for high

volume customers to substantially reduce their water use. As part of water conservation demonstration efforts, Xeriscaping of the grounds surrounding Denver Water's Administrative Complex was completed during the year.

The addition of some \$500 million in capital facilities during the 1980s plus the requirements of other aging facilities has resulted in the need for additional repair, upgrading and improvement of facilities in the late 1990s. The Engineering Division successfully completed 75% of some 160 to 180 small to medium sized projects during the year.

A pilot program of reading water meters by radio remote control from passing trucks was launched on two meter reading routes during the year. Based on the results from the pilot program, the program may be expanded.

Financial Information

Discussion of Controls

Internal Control Structure - Management of Denver Water is responsible for establishing and maintaining an internal control structure designed to ensure that the assets of Denver Water are protected from loss, theft, or misuse, and to ensure that adequate accounting data are compiled to allow for the preparation of financial statements in conformity with generally accepted accounting principles. The internal control structure is designed to provide reasonable, but not absolute, assurance that these objectives are met. The concept of reasonable assurance recognizes that: (1) the cost of a control should not exceed the benefits likely to be derived; and (2) the valuation of costs and benefits requires estimates and judgments by management.

Budgetary Controls - In addition, although Denver Water is not legally required to adopt budgetary accounting and reporting and make appropriations for expenditures, it does maintain budgetary controls through a formal budget process, which involves:

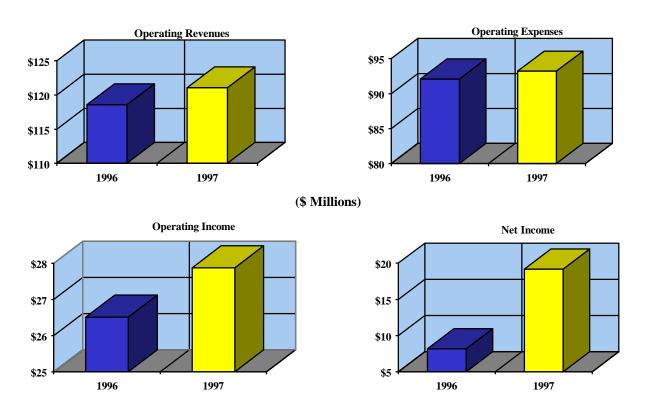
- Maintaining a long-range plan for addition and replacement of water system facilities based on projected demands for water, which is updated annually and is used as a basis for projecting capital expenditures in the budget.
- Maintaining a long-range plan for operation and maintenance activities.
- Developing a long-range financial plan for issuance of debt and adjustment of water rates.
- Developing annual work plans by program (raw water, reuse, water treatment, delivery, and general plant), based on the long-range plan, for operation and maintenance activities and capital projects.
- Establishing cost control center budgets for labor, materials, and services for each of the projects or activities listed on the annual operation and maintenance and capital work plans, which are combined on a total entity basis.
- Providing explanations for significant variances between budgeted and actual expenditures to the Board on a quarterly basis.

Discussion of 1997 Operating Results

Summary operating results compared to last year are as follows (amounts expressed in thousands):

| | 1997 | 1996 | Increase (Decrease) | Percent Change |
|---------------------------|------------|-----------|------------------------|-------------------|
| Operating Revenues | \$ 121,074 | \$118,580 | \$ 2,494 | 2% |
| Operating Expenses | (93,202) | (92,072) | 1,130 | 1% |
| Operating Income | 27,872 | 26,508 | 1,364 | 5% |
| Net Nonoperating Expenses | (8.674) | (18.315) | (9.641) | (53)% |
| Net Income | \$ 19,198 | \$ 8,193 | \$ 11,005 | 134% |
| | | | | |

(See Financial Section for more details and Statistical Section for ten-year trend data.)



Operating revenues increased primarily as a result of a 1% decrease in treated water consumption offset by a rate increase effective January 1, 1997. *Operating expenses* increased slightly as a result of increases and decreases in several areas. *Net Nonoperating Expenses* decreased primarily as a result of increased gains on disposition of property, plant and equipment, and increased interest income.

Additions to Property, Plant and Equipment

Capital additions for 1997 amounted to \$47.7 million, an increase of \$14.5 million or 44% from 1996. Additions included \$16.8 million for new facilities, \$24.1 million for facility replacements and improvements, and \$6.8 million for general equipment. See "Additions to Property, Plant and Equipment" in the statistical section for details.

Pension Trust Fund Operations

Net assets available for plan benefits increased \$27.1 million or 19% in 1997, including contributions and gains and losses on investments, to a total of \$169.9 million as of December 31, 1997. The unfunded actuarial liability at January 1, 1997 was \$20.5 million or 49% of covered payroll, down from 66% at January 1, 1996. The pension trust fund return was 21.4% for the year. This return compares with a return of 33.4% for the Standard & Poor's 500 and 9.8% for the Shearson

Lehman Government/Corporate index. The annual actuarial valuation continues to reflect a well-funded plan. See Note 8 in the Financial Section for more details.

Debt Administration

During the year, Denver Water issued \$19,530,000 of General Obligation Refunding Bonds. At December 31,1997, \$243,205,000 of City and county of Denver general obligation water bonds were outstanding. Since Denver Water is committed to repay the bonds and related interest from its revenues, they are not included in any debt limitations that the City Charter requires. Denver Water has maintained an AA rating from Standard & Poor's Corporation and an Aa2 rating from Moody's Investors Service. In addition, \$54,025,000 of Certificates of Participation, and \$34,465,000 Obligation Under Capital Lease were outstanding. See Notes 4, 5, and 7 in the Financial Section for more details.

SEC Disclosure Requirements

Securities and Exchange Commission ("SEC") Rule 15c2-12 requires that issuers of municipal securities provide certain annual financial information. The Government Finance Officers Association of the United States and Canada (GFOA) recommends that these disclosures be contained in the comprehensive annual financial report (CAFR). Denver Water's SEC disclosure requirements can be found on the following pages:

Audited Financial Statements Section B - Financial Section

Number of Customer Accounts Page C-51
Total Treated Water Delivery Page C-25

Total Outstanding Indebtedness Pages B-11 (note 4), B-12 (note 5), B-22, B-24

System Development Charges and Participation Fees Page C-59
Receipts and Expenditures Page C-60

Cash Management

The principal objective of Denver Water's investment policy is safety while attaining an appropriate rate of return. At year-end, approximately 78% of the investments were held in US government and agency securities. The remaining investments were in commercial paper, rated A-1 or P-1 by Standard & Poor's or Moody's or in money market mutual funds. All securities were classified as category one, the category of least custodial credit risk as defined by the Governmental Accounting Standards Board. Denver Water earned interest income of \$5,100,000 on all investments for the year, for a total return including price changes of 5.7 %. See Note 3 in the Financial Section for more details.

Risk Management

In 1997, the Board approved the continuance of a risk management program which includes self-insurance for liability, selective property damage, and employee disability losses. Denver Water's liability is limited under the Colorado Governmental Immunity Act to \$150,000 per person and \$600,000 per occurrence. Denver Water has designated \$4 million of its investments as available for claims covered by self-insurance. See Note 9 in the Financial Section for more details.

Other Information

Independent Audit

The City Charter requires an annual audit of the accounts of Denver Water by the City Auditor. The independent accounting firm of Arthur Andersen LLP was selected by the City Auditor to conduct this audit for 1997. Arthur Andersen's report is included in the financial section of this report.

Awards

Comprehensive Annual Financial Report

The GFOA awarded a Certificate of Achievement for Excellence in Financial Reporting to Denver Water for its CAFR for the year ended December 31, 1996. The Certificate of Achievement is a prestigious national award recognizing conformance with the highest standards for preparation of state and local government financial reports.

In order to be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized comprehensive annual financial report, whose contents conform to program standards. The CAFR must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. Denver Water has received a Certificate of Achievement for the last nine consecutive years (years ended December 31, 1988 - 1996). We believe our current report continues to conform to the Certificate of Achievement program requirements, and we are submitting it to the GFOA.

Employees' Retirement Plan

The GFOA also awarded a Certificate of Achievement for Excellence in Financial Reporting to Denver Water for its Employees' Retirement Plan CAFR for the year ended December 31, 1996. The Denver Water Employees' Retirement Plan has received a Certificate of Achievement for the last three consecutive years. We believe our current report continues to conform to the Certificate of Achievement program requirements, and we are submitting it to the GFOA.

Annual Budget

The GFOA presented an award for Distinguished Budget Presentation to Denver Water for its annual budget for the fiscal year beginning January 1, 1997. This is the fifth consecutive year Denver Water has received this award. In order to receive this award, a governmental unit must publish a budget document that meets program criteria as a policy document, as an operations guide, as a financial plan, and as a communications device. The award is valid for a period of one year only. We believe our current budget continues to conform to program requirements, and we are submitting it to the GFOA to determine its eligibility for another award.

Acknowledgments

This report was prepared by the staff of Denver Water under the leadership and support of the Board of Water Commissioners.

Sincerely,

Manager, Denver Water

Moberta M. Wilson Director of Finance

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CHARTER

(The Charter of the City and County of Denver, which can only be changed by a vote of the citizens of Denver, devotes pages 81 through 86 to the duties and responsibilities of the Board of Water Commissioners. Following are excerpts from these pages.)

"There shall be and hereby is continued and created a non-political Board of Water Commissioners of five members, to have complete charge and control of a water works system and plant for supplying the City and County of Denver and its inhabitants with water for all uses and purposes

"The Board shall have and exercise all the powers of the City and County of Denver including those granted by the Constitution and by the law of the State of Colorado and by the Charter in regard to purchasing, condemning and purchasing, acquiring, constructing, leasing, extending and adding to, maintaining, conducting and operating a water works system and plant for all uses and purposes, and everything necessary, pertaining or incidental thereto, including authority to dispose of real or personal property not useful for or required in the water works operation. The Board shall have authority to generate and dispose of electric energy for water works purposes or any other purpose of the City and County of Denver The Board shall have power in the name of the City and County of Denver to make and execute contracts, take and give instruments of conveyance, and do all other things necessary or incidental to the powers herein granted The Board shall institute and defend all litigation affecting its powers and duties or in relation to said water works system and plant and the property and rights connected therewith or incidental thereto

"There is hereby created a Water Works Fund into which shall be placed all revenues received from the operation of the water works system and plant together with all monies coming into said fund from other sources. All revenues of the Water Department shall daily be turned over to the Treasurer of the City and County of Denver who shall open and keep a separate account for said Water Works Fund and shall faithfully account for all monies received and disbursed on account thereof . .

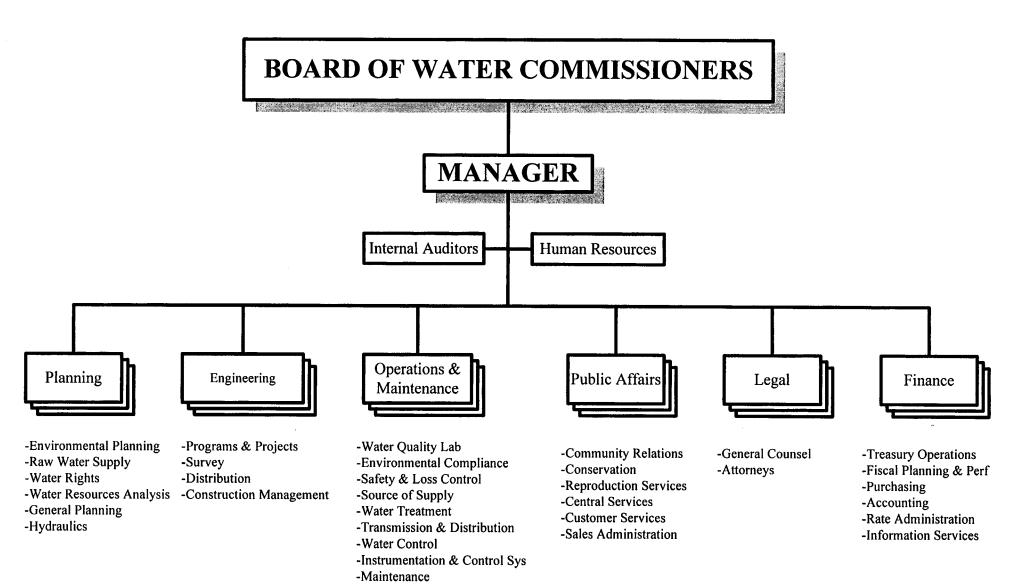
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"The Board shall fix rates for which water shall be furnished for all purposes within the City and County of Denver, and rates shall be as low as good service will permit. Rates may be sufficient to pay for operation, maintenance, reserves, debt service, additions, extensions, betterments, including those reasonably required for the anticipated growth of the Denver metropolitan area, and to provide for Denver's general welfare

"... Rates charged for water furnished for use inside the city limits of the City and County of Denver shall be uniform as far as practicable and so related to the service furnished or the volume of water used as to bring about a fair and equitable distribution among all water users of the total amount to be realized from revenues derived from the sale of water used within the City and County of Denver....

"The Board shall have power to lease water and water rights for use outside the territorial limits of the City and County of Denver, but such leases shall provide for limitations of delivery of water to whatever extent may be necessary to enable the Board to provide an adequate supply of water to the people of Denver and provided, further, that every such lease shall contain terms to secure the payment into the Water Works Fund of sufficient money to fully reimburse the people of Denver for the cost of furnishing the water or water right which is the subject of such lease together with an additional amount to be determined by the Board

"Bonds, the proceeds of which shall be placed in the Water Works Fund and expended by the Board of Water Commissioners for water works purposes in the sole discretion of the Board, and secured by the general credit of the City and County of Denver and payable as to interest and principal from general ad valorem taxes which may be levied without limitation of rate or amount may be issued upon approval of the same class of electors as is provided for approval of issuance of other general obligation bonds of the City and County of Denver"













BOARD OF WATER COMMISSIONERSTop from left, Denise S. Maes, Joe Shoemaker; Bottom from left, Richard A. Kirk, Ronald L. Lehr, William R. Roberts

Denise S. Maes, President Attorney: Ballard, Spahr, Andrews & Ingersoll

Joe Shoemaker, First Vice President

Of Counsel: Shoemaker, Wham, Krisor & Shoemaker; Manager, Meridian Golf Club; Exec. Sec., Colorado Cty. Retirement Assn.; Chrmn, Platte River Greenway Foundation

Richard A. Kirk

Chairman of the Board of Access Long Distance Co.

Ronald L. Lehr

Attorney & Consultant: Telecommunications & Energy Law

William R. Roberts

Marketing Director, Empire Construction Services

Commissioner since July 10, 1995; Term expires July 9, 2001.

Commissioner since July 10, 1995; Term expires July 9, 2001.

Commissioner since July 21, 1993; Term expires July 12, 1999.

Commissioner since July 21, 1993; Term expires July 12, 1999.

Commissioner since July 10, 1997; Term expires July 10, 2003.

LAST 20 COMMISSIONERS

Gerald L. Stapp
Max G. Brooks
Leonard M. Campbell
Armand Asborno
Andrew Horan, Jr.
Richard S. Shannon, Jr.
Don Friedman
William G. Temple
Charles F. Brannan
James B. Kenney, Jr.

July 8, 1963 to July 14, 1969
January 27, 1969 to July 6, 1970
July 12, 1965 to December 10, 1970
July 14, 1970 to July 2, 1973
July 12, 1965 to January 1, 1976
July 9, 1973 to April 18, 1977
April 27, 1977 to May 1, 1978
June 28, 1962 to July 13, 1978
December 14, 1970 to September 26, 1983
January 9, 1976 to September 26, 1983

Charles G. Jordan
D. Dale Shaffer
John A. Yelenick
Marguerite S. Pugsley
Elizabeth Adrian Hennessey
Malcolm M. Murray
Donald L. Kortz
Monte Pascoe
Romaine Pacheco
Hubert A. Farbes, Jr.

September 26, 1983 to June 28, 1 August 9, 1978 to July 8, 1985 July 14, 1969 to August 25, 1987 May 10, 1978 to August 25, 1987 November 4, 1985 to July 28, 198 August 25, 1987 to July 12, 1993 August 25, 1987 to July 12, 1993 September 26, 1983 to July 10, 1 July 31, 1989 to July 10, 1995 July 8, 1985 to July 14, 1997



Top from left, Manager Barry, Diebel, Jordan; Bottom from left, Pokorney, Wells, Wilson, Work

DISCRETIONARY PERSONNEL

(Employees Serving in Executive Discretionary Positions Solely at the Pleasure of the Board)

Manager and Administrative Staff

Hamlet J. Barry, III, Secretary-Manager
Jonathan L. Diebel, Director of Engineering
Charles G. Jordan, Director of Public Affairs
Edward E. Pokorney, Director of Planning
Patricia L. Wells, General Counsel
Roberta M. Wilson, Director of Finance
Stephen W. Work, Director of Operations & Maintenance

Other Staff

John H. Bambei, Jr., Chief of Engineering
Edith A. Carlson, Manager of Internal Auditing
Kathryn M. Corry, Manager of Treasury Operations
Sara Duncan, Intergovernmental Affairs Coordinator
Jane Earle, Manager of Public Relations
Carla Elam-Floyd, Manager of Human Resources
David B. LaFrance, Manager of Rate Administration
David L. Little, Manager of Water Resource Planning
Trina L. McGuire, Manager of Media Relations
Michael L. Walker, Attorney
Robert K. Weir, Deputy Director of Maintenance
Rockford D. Wiley, Manager of General Planning
Theodore R. Williams, Manager of Diversity

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Denver Water, Colorado

For its Comprehensive Annual Financial Report for the Fiscal Year Ended December 31, 1996

A Certificate of Achievement for Excellence in Financial Reporting is presented by the Government Finance Officers Association of the United States and Canada to government units and public employee retirement systems whose comprehensive annual financial reports (CAFRs) achieve the highest standards in government accounting and financial reporting.



ARTHUR ANDERSEN LLP

To the Honorable Donald J. Mares, Auditor, and the Board of Water Commissioners City and County of Denver, Colorado:

We have audited the accompanying balance sheets of the BOARD OF WATER COMMISSIONERS, CITY AND COUNTY OF DENVER, COLORADO ("Board"), as of December 31, 1997 and 1996, and the related statements of revenues, expenses and changes in retained earnings and cash flows for the years then ended. These financial statements and the accompanying supplemental financial information are the responsibility of the Board's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Board of Water Commissioners, City and County of Denver, Colorado, as of December 31, 1997 and 1996, and the results of its operations and its cash flows for the years then ended in conformity with generally accepted accounting principles.

Our audits were made for the purpose of forming an opinion on the basic financial statements taken as a whole. The accompanying supplemental financial information on pages B-21 through B-25 is presented for purposes of additional analysis and is not a required part of the Board's basic financial statements. This information has been subjected to the auditing procedures applied in our audits of the basic financial statements and, in our opinion, is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

Denver, Colorado March 5, 1998

arthur andersen LLP

BOARD OF WATER COMMISSIONERS CITY AND COUNTY OF DENVER, COLORADO BALANCE SHEETS

As of December 31, 1997 and 1996 (amounts expressed in thousands)

| <u>ASSETS</u> | <u>1997</u> | <u>1996</u> |
|---|---------------------------------|---------------------------------|
| CURRENT ASSETS: Cash Temporary cash investments, at cost which | \$ 91 | \$ 90 |
| approximates market, including accrued interest (includes net surplus land sale receipts of \$3,498 and \$1,228, respectively) Accounts receivable Materials and supplies inventory, at cost | 114,763 16,985 4,094 | 85,676 17,076 4,984 |
| Total current assets | 135,933 | 107,826 |
| RESTRICTED INVESTMENTS | 28,878 | 6,109 |
| PROPERTY, PLANT AND EQUIPMENT: Utility plant Nonutility plant | 1,201,587 7,038 1,208,625 | 1,163,743 6,904 1,170,647 |
| Less accumulated depreciation and amortization | (287,100) 921,525 | (267,575) 903,072 |
| Utility plant under capital lease, less accumulated amortization of \$1,209 and \$672, respectively Construction in progress | 41,772 30,456 | 42,309 23,115 |
| Net property, plant and equipment | 993,753 | 968,496 |
| OTHER LONG-TERM ASSETS: Assets held under deferred compensation plan, at market Deferred charges Long-term receivable | 21,269 5,513 | 15,854 22,854 |
| | \$ 1,185,346 | \$ 1,121,139 |

The accompanying notes are an integral part of these financial statements.

BOARD OF WATER COMMISSIONERS CITY AND COUNTY OF DENVER, COLORADO BALANCE SHEETS (Continued) As of December 31, 1997 and 1996

(amounts expressed in thousands)

| <u>LIABILITIES AND EQUITY</u> | <u>1997</u> | <u>1996</u> |
|---|--------------|--------------|
| CURRENT LIABILITIES: | | |
| Accounts payable | \$ 4,602 | \$ 2,786 |
| Accrued payroll, vacation and other employee benefits | 10,175 | 9,591 |
| Construction contracts (including retainages of | , | , |
| \$178 and \$141, respectively) | 578 | 1,741 |
| Accrued interest on long-term debt | 5,212 | 5,125 |
| Unearned revenue | _ | 421 |
| Current portion of bonds payable | 18,685 | 22,797 |
| Current portion of certificates of participation | 2,270 | 2,170 |
| Current portion of obligation under capital lease | 685 | 641 |
| Total current liabilities | 42 207 | 45 272 |
| Total current habilities | 42,207 | 45,272 |
| LONG-TERM LIABILITIES: | | |
| Bonds payable, net | 222,701 | 221,092 |
| Certificates of participation | 51,345 | 53,453 |
| Obligation under capital lease | 33,780 | 34,465 |
| Customer advances for construction | 26,481 | 2,631 |
| Obligation for deferred compensation plan | 20,101 | 15,854 |
| Accrued sick leave | 5,316 | 5,554 |
| rectued sick loave | 3,310 | |
| Total long-term liabilities | 339,623 | 333,049 |
| Total liabilities | 381,830 | 378,321 |
| COMMITMENTS AND CONTINGENCIES (NOTES 8, 9, 10, 11 and 12) | | |
| EQUITY: | | |
| Contributed capital: | | |
| Contributions in aid of construction | 153,715 | 140,794 |
| System development charges | 239,672 | 217,576 |
| Retained earnings (reinvested in utility plant and other assets) | 410,129 | 384,448 |
| rectained carrings (remitested in utility plant and other assets) | 110,129 | 201,110 |
| Total equity | 803,516 | 742,818 |
| | ¢ 1 105 246 | ¢ 1 121 120 |
| | \$ 1,185,346 | \$ 1,121,139 |
| | | |

The accompanying notes are an integral part of these financial statements.

BOARD OF WATER COMMISSIONERS CITY AND COUNTY OF DENVER, COLORADO STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN RETAINED EARNINGS Years Ended December 31, 1997 and 1996 (amounts expressed in thousands)

| | | 1 |
|---|------------|------------|
| | 1997 | 1996 |
| OPERATING REVENUES: | | |
| Water | \$ 116,884 | \$ 114,635 |
| Power generation and other | 4,190 | 3,945 |
| 1 ower generation and other | 7,170 | 3,743 |
| Total operating revenues | 121,074 | 118,580 |
| OPERATING EXPENSES: | | |
| Source of supply, pumping, treatment and distribution | 40,266 | 38,046 |
| General and administrative | 25,236 | 26,836 |
| Depreciation and amortization | 21,047 | 21,047 |
| Customer service | 6,653 | 6,143 |
| Customer service | 0,033 | 0,143 |
| Total operating expenses | 93,202 | 92,072 |
| Total operating expenses | 73,202 | |
| OPERATING INCOME | 27,872 | 26,508 |
| | | |
| NONOPERATING REVENUES (EXPENSES): | | |
| Interest income | 5,958 | 4,417 |
| Interest expense, less capitalized interest of \$234 | - , | , |
| and \$107, respectively | (19,350) | (19,979) |
| Gain (loss) on disposition of property, plant and equipment | 4,158 | (2,968) |
| Other income, net | 560 | 215 |
| Other mediae, net | 300 | |
| Net nonoperating expenses | (8,674) | (18,315) |
| NET INCOME | 19,198 | 8,193 |
| NET INCOME | 19,190 | 0,193 |
| Current year's depreciation expense on utility plant | | |
| acquired through contributions in aid of construction | | |
| and system development charges | 6,483 | 6,157 |
| and system development charges | 0,403 | 0,137 |
| RETAINED EARNINGS (REINVESTED IN UTILITY PLANT | | |
| AND OTHER ASSETS): | | |
| Beginning of year | 381 118 | 370.008 |
| Degining of year | 384,448 | 370,098 |
| End of year | \$ 410,129 | \$ 384,448 |
| • | | |
| | <u></u> | |

The accompanying notes are an integral part of these financial statements.

BOARD OF WATER COMMISSIONERS CITY AND COUNTY OF DENVER, COLORADO STATEMENTS OF CASH FLOWS

Years Ended December 31, 1997 and 1996 (amounts expressed in thousands)

| | 1997 | 1996 |
|--|------------|--------------|
| CASH FLOWS FROM OPERATING ACTIVITIES: | | |
| Operating income | \$ 27,872 | \$ 26,508 |
| Adjustments to reconcile operating income to net cash | | |
| provided by operating activities- | | |
| Other nonoperating revenue and expense items, net | 2,199 | 1,989 |
| Depreciation and amortization of property, | 21.047 | 21.047 |
| plant and equipment | 21,047 | 21,047 |
| Deferred compensation plan withholdings | - | 1,183 |
| Change in assets and liabilities- | 520 | (2.207) |
| Accounts receivable | 538 505 | (2,207) |
| Materials and supplies inventory | 206 | 6 (1,736) |
| Prepaid expenses Accounts payable | 1,486 | 1,202 |
| Accounts payable Accrued payroll, vacation and other employee benefits | 346 | (273) |
| Unearned revenue | | |
| Unearned revenue | (421) | 381 |
| Net cash provided by operating activities | 53,778 | 48,100 |
| CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES: | | |
| Proceeds from contributions in aid of construction | 5,940 | 4,645 |
| Proceeds from (reductions of) customer advances for construction | 23,850 | (1,171) |
| Proceeds from system development charges | 22,627 | 15,122 |
| Proceeds from sales of property, plant and equipment | 5,298 | 225 |
| Proceeds from long-term bonds, plus premium, less discount | 19,644 | 16,835 |
| Acquisition of property, plant and equipment | (40,944) | (30,171) |
| Principal payments for long-term bonds | (22,797) | (21,341) |
| Principal payments for certificates of participation | (2,170) | (2,035) |
| Principal payments for capital lease obligations | (641) | (600) |
| Interest paid | (18,686) | (18,986) |
| Net cash used for capital and related financing activities | (7,879) | (37,477) |
| CASH FLOWS FROM INVESTING ACTIVITIES: | | |
| Proceeds from sales and maturities of investments | 239,680 | 210,153 |
| Interest received from investments | 5,386 | 4,323 |
| Purchase of investments | (290,964) | (225,098) |
| | | (220,000) |
| Net cash used for investing activities | (45,898) | (10,622) |
| NET INCREASE IN CASH | 1 | 1 |
| CASH, AT BEGINNING OF YEAR | 90 | 89 |
| CASH AT END OF VEAD | \$ 91 | ۰۰۰ ۹۰ |
| CASH, AT END OF YEAR | \$ 91 | \$ 90 |
| NONCASH CAPITAL AND RELATED FINANCING ACTIVITIES: | | |
| Assets acquired through capital contributions (see Note 1 - Property, | | |
| Plant and Equipment) | \$ 6,973 | \$ 2,094 |
| The accompanying notes are an integral | | |

BOARD OF WATER COMMISSIONERS CITY AND COUNTY OF DENVER, COLORADO NOTES TO FINANCIAL STATEMENTS Years Ended December 31, 1997 and 1996

(1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Reporting Entity

The Board of Water Commissioners ("Board") was created under the Charter of the City and County of Denver, Colorado ("City") as an independent, nonpolitical board. The Board has complete charge and control of a water works system and plant which supplies water to customers located within the City and to entities serving other customers located in certain outlying areas in the Denver metropolitan area.

The Board has a five-member governing body, which is appointed by the Mayor of the City for overlapping six-year terms. In accordance with Governmental Accounting Standards Board ("GASB") Statement No. 14, "The Financial Reporting Entity," the Board would be classified as 1) an "other stand-alone government" since the Board is a legally separate and distinct entity from the City under the Charter of the City, and the City is not financially accountable for the Board, and 2) a "related organization" since the Mayor of the City appoints the Board's governing body, but is not financially accountable. However, the City has elected to include the Board's financial statements in the City's general purpose financial statements as a component unit enterprise fund because, in the City's opinion, the nature and significance of the Board's relationship with the City are such that exclusion would cause the City's financial statements to be misleading or incomplete.

As required by generally accepted accounting principles, the Board's financial statements present the Board and its component units. The Board's interest in the component unit discussed below is blended with the Board's reporting entity because of the significance of its operational or financial relationship with the Board.

The Denver Capital Leasing Corporation ("DCLC") was organized by the City as a nonprofit corporation in accordance with state law to facilitate financing of certain capital projects for the City and the Board. DCLC is governed by a three-member board appointed by the Mayor, and is reported as a component unit of the City. It is similar to an "undivided interest," an ownership arrangement in which two or more parties own property in which title is held individually to the extent of each party's interest, each party is liable for specific, identifiable obligations, and borrowing is done individually. Each party reports its own assets, liabilities, revenues, and expenses.

DCLC entered into a Master Lease Purchase Agreement ("MLPA") with the Board pursuant to which the Board leases from DCLC certain facilities. The facilities are constructed by the Board with proceeds from the issuance and sale of Certificates of Participation ("Certificates"), evidencing assignments of proportionate interests in rights to receive certain revenue of the Board under its MLPA with DCLC. The Certificates are payable solely from the Board's lease payments under the MLPA. DCLC has no obligation to make any payment on the Certificates. As the Board effectively has assumed substantially all of the risks and rewards of ownership, the Board accounts for the leased assets and related lease obligations as its own assets and its own debt (see Note 4).

The Board's trusteed single-employer defined benefit pension plan ("Plan") is part of the Board's entity but has been excluded for financial reporting purposes because of the following provision of the Plan (see Note 8):

The Plan and the Retirement Trust Fund created by the Plan were established and shall be maintained for the exclusive benefit of the eligible Employees of the Board and their Beneficiaries. No part of the Retirement Trust Fund can ever revert to the Board or be used for or diverted to purposes other than the exclusive benefit of the Employees of the Board and their Beneficiaries or the payment of expenses of the Plan.

Separate audited financial statements are available for the Plan.

Basis of Accounting

The Board's financial statements are accounted for on the flow of economic resources measurement focus, using the accrual basis of accounting. Under this method, all assets and liabilities associated with operations are included on the balance sheet, revenues are recorded when earned, and expenses are recorded at the time liabilities are incurred.

Accounting Standards

The Board applies all applicable pronouncements of the GASB as well as the following pronouncements issued on or before November 30, 1989, unless those pronouncements conflict with or contradict GASB pronouncements: Statements and Interpretations of the Financial Accounting Standards Board ("FASB"), Opinions of the Accounting Principles Board, and Accounting Research Bulletins of the Committee on Accounting Procedure of the American Institute of Certified Public Accountants. In accordance with GASB Statement No. 20, the Board has elected not to apply FASB pronouncements issued after November 30, 1989.

Statements of Cash Flows

The definition of cash for purposes of the statements of cash flows is cash on hand and equity in treasurer's cash which represents cash on deposit with the City Treasurer in the Water Works Fund. Treasurer's cash is available for immediate withdrawal upon request by the Board.

Materials and Supplies Inventory

Materials and supplies inventory is valued at weighted average cost, which approximates market.

Property, Plant and Equipment

Purchased and constructed property, plant and equipment ("PP&E") are recorded at cost. Donated PP&E are recorded at their estimated fair market value on the date received.

Depreciation and amortization are computed using the straight-line method over the estimated useful lives of the respective depreciable or amortizable asset classes as follows:

| Buildings and improvements | 10 - 80 years |
|--|---------------|
| Motor vehicles and motorized equipment | 7 - 50 years |
| Furniture, machinery and equipment | 5 - 20 years |

Depreciation and amortization for the years ended December 31, 1997 and 1996 were as follows (amounts expressed in thousands):

| | Years Ended December 31, | |
|--|--------------------------|-----------|
| | 1997 | 1996 |
| | | |
| Operating expenses, water service | \$ 21,047 | \$ 21,047 |
| Nonoperating expenses | 99 | 92 |
| Other, as allocated | 1,769 | 1,748 |
| Total depreciation and amortization | 22,915 | 22,887 |
| Less: amortization of plant-related studies included in deferred charges | (1,389) | (1,386) |
| Total depreciation and amortization of property, plant and equipment | \$ 21,526 | \$ 21,501 |

Contributions in aid of construction ("CAC") represent facilities, or cash payments for facilities, received from property owners, governmental agencies and customers who receive benefit from such facilities. System development charges ("SDC") represent fees charged to customers to connect to the water system. Assets acquired through CAC and SDC are included in property, plant and equipment. Depreciation applicable to such assets is computed using the straight-line method over 80 and 60 years for CAC and SDC assets, respectively, and is charged to operations and then closed to the related equity accounts.

Maintenance and repairs are charged to expense as incurred, whereas major betterments are capitalized and depreciated or amortized. At the time of retirement or disposition of depreciable property, the related cost and accumulated depreciation are removed from the accounts, and the resulting gain or loss is reflected in net income.

Costs of certain engineering, feasibility, environmental and other studies are capitalized until the related projects become operational. When projects become operational, the costs are included in property, plant and equipment and depreciated over the estimated useful life of the asset. In the event the projects do not become operational or the costs do not benefit future projects, such costs are expensed. If the projects become inactive but are not abandoned, the costs are carried as deferred charges and amortized over their estimated useful lives, or until the related projects become operational or abandoned. At December 31, 1997 and 1996, inactive development costs included in deferred charges which, in the Board's opinion, will be used in connection with future construction activities, totaled \$19.0 million and \$20.3 million, respectively.

Interest during the construction period is capitalized on major construction projects. Certain applicable general and administrative costs of an overhead nature are also capitalized, and such costs are depreciated over the estimated useful lives of the related assets.

Interest earned on funds received from the issuance of Certificates is netted against capitalized interest for those projects.

Revenue

The Board accrues for estimated unbilled revenues for water provided through the end of each year since the last reading of the meters based on the billing cycle.

NOTES TO FINANCIAL STATEMENTS (Continued)

Years Ended December 31, 1997 and 1996

Rates

Under the City Charter, the Board is empowered to set rates for all of its customers. These rates "...may be sufficient to pay for operation, maintenance, reserves, debt service, additions, extensions, betterments, including those reasonably required for the anticipated growth of the Denver metropolitan area, and to provide for Denver's general welfare...."

On September 19, 1995, the Board approved a rate increase, effective January 1, 1996, which was estimated to increase normalized (weather adjusted) annual revenues by 5.8%.

On October 1, and October 15, 1996, the Board approved rate increases for different customer groups, all effective January 1, 1997, which were collectively estimated to increase normalized annual revenues by 4.5%.

On September 16, 1997, the Board approved a rate increase, effective January 1, 1998, which is estimated to increase normalized annual revenues by 3.1%.

Employee Compensated Absences

The Board's policy is to accrue for employee vacation, sick leave and other compensated absences when the employee vests in such benefits. Nonvested sick leave is expensed when paid.

Early Implementation of GASB Statement No. 27

The Board has implemented GASB Statement No. 27, "Accounting for Pensions by State and Local Governmental Employers," in 1995, in advance of the 1998 implementation date established by the GASB. The implementation affects the disclosure in Note 8, "Defined Benefit Pension Plan." It does not affect the balance sheets, statements of revenues, expenses and changes in retained earnings, or statements of cash flows.

Implementation of GASB Statement No. 32

The Board has implemented GASB Statement No. 32, "Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans" in 1997 (see Note 6).

Classification of Accounts

Certain amounts in the 1996 Statement of Revenues, Expenses and Changes in Retained Earnings have been reclassified to conform to the current year presentation.

(2) <u>CONTRIBUTIONS IN AID OF CONSTRUCTION AND SYSTEM DEVELOPMENT</u> CHARGES

Changes in CAC and SDC for the years ended December 31, 1997 and 1996 were as follows (amounts expressed in thousands):

| | CAC | SDC |
|---|-------------------|-------------------|
| Balance, December 31, 1995 | \$ 136,064 | \$ 206,601 |
| Additions Current year's depreciation expense | 6,740 (2,010) | 15,122 (4,147) |
| Balance, December 31, 1996 | 140,794 | 217,576 |
| Additions Current year's depreciation expense | 15,015 (2,094) | 26,485 (4,389) |
| Balance, December 31, 1997 | \$ 153,715 | \$ 239,672 |

(3) CASH AND TEMPORARY CASH INVESTMENTS

Colorado statutes and the City Charter authorize the Board to expend funds for the operation of the Board, including the purchase of investments. The Board has an investment policy that allows for the following investments:

- U.S. Government direct obligations and unconditionally guaranteed federal agency securities
- Other federal agency securities
- Repurchase agreements
- Banker's acceptances
- Commercial paper
- Money market mutual funds

The Board's investments are categorized to give an indication of the level of custodial credit risk assumed by the Board at year-end. Under the criteria of GASB Statement No. 3, "Deposits with Financial Institutions, Investments and Reverse Repurchase Agreements," Category 1 includes investments which are insured or registered or held by the Board or its agent in the Board's name; Category 2 includes investments which are uninsured and unregistered, with securities held by the counterparty's trust department or agent in the Board's name; and Category 3 includes investments which are uninsured and unregistered, with securities held by the counterparty, or by its trust department or agent, but not in the Board's name.

The Board's restricted and unrestricted investments at December 31, 1997, at cost and market value, consisted of the following (amounts expressed in thousands):

| | Carrying | |
|----------------------------|------------|------------|
| | Amount and | |
| | Maı | rket Value |
| U.S. Government and Agency | | |
| Securities | \$ | 112,222 |
| Commercial Paper | | 23,875 |
| Total Category 1 | | 136,097 |
| Money Market Mutual Funds | | |
| (Not Categorized) | | 7,544 |
| | \$ | 143,641 |
| | | |

The Board's bank balances are also categorized to give an indication of the level of custodial credit risk assumed by the Board at year-end. Under the criteria of GASB Statement No. 3, Category 1 includes bank balances which are insured or collateralized with securities held by the Board or its agent in the Board's name; Category 2 includes bank balances which are collateralized with securities held by the pledging financial institution's trust department or agent in the Board's name; and Category 3 includes bank balances which are uncollateralized (this includes any bank balance that is collateralized with securities held by the pledging financial institution, or by its trust department or agent but not in the Board's name).

The carrying amount of cash at December 31, 1997, was \$91,000, and the bank balances totaled \$617,000. Of the total of bank balances, \$100,000 was insured by federal depository insurance (Category 1), and the remainder was collateralized with securities held by banks in their trust departments pursuant to the Colorado Public Deposit Protection Act, and as such, are classified as Category 2.

(4) <u>CERTIFICATES OF PARTICIPATION</u>

The Certificates (see Note 1) were issued pursuant to a Mortgage and Indenture of Trust Agreement between a bank, acting as trustee ("Trustee") and DCLC, pursuant to which DCLC assigned all of its rights, title, and interest under the MLPA to the Trustee. The MLPA is subject to termination on an annual basis by the Board, upon which any outstanding Certificates will be payable solely from funds held by the Trustee and any amounts made available by the Trustee's sublease or sale of the leased assets under the MLPA.

Certificates were first issued in 1987 to finance the construction of pretreatment facilities for the Marston Treatment Plant. The Certificates were issued in the amount of \$28,185,000, to be retired over a 20-year period at an average interest rate of 7.82%. The pretreatment facilities were completed in 1989.

In 1991, additional Certificates were issued in the amount of \$58,930,000 to provide the Board with financing for the construction of improvements to the Moffat Treatment Plant, the construction of the 64th Avenue Pump Station, and to advance refund \$20,735,000 of the 1987 Certificates. The 1991 Certificates are to be retired over a 20-year period at an average interest rate of 6.70%.

The partial advance refunding of the 1987 Certificates resulted in a difference between the reacquisition price and the net carrying amount of the old debt ("deferred amount on refunding") of \$1,861,000. This difference, reported as a deduction from the Certificates, was amortized as a component of interest expense through May 1997, when the remaining 1987 Certificates were paid off.

NOTES TO FINANCIAL STATEMENTS (Continued)

Years Ended December 31, 1997 and 1996

The MLPA, as amended, requires a reserve fund be established from proceeds from the sale of the Certificates. The reserve fund is to be used in the event the Board fails to make payment of any base rental payments or other payments and fees defined in the MLPA. At December 31, 1997 and 1996, Restricted Investments included restricted reserve fund investments of \$5,958,000 and \$6,109,000, respectively. At the end of the lease term, the reserve fund and any related interest will be returned to the Board.

A summary of debt maturity for the Certificates as of December 31, 1997, is as follows (amounts expressed in thousands):

| | Principal | Interest | Total |
|-------------------|-----------|-----------|-----------|
| Year of Maturity: | | | |
| Current: | \$ 2,270 | \$ 3,489 | \$ 5,759 |
| | | | |
| Long-term: | | | |
| 1999 | 2,395 | 3,353 | 5,748 |
| 2000 | 2,535 | 3,209 | 5,744 |
| 2001 | 2,685 | 3,057 | 5,742 |
| 2002 | 2,845 | 2,893 | 5,738 |
| After 2002 | 41,295 | 16,203 | 57,498 |
| | | | |
| | 51,755 | 28,715 | 80,470 |
| Less discount | (410) | | (410) |
| | | | |
| Total long-term | 51,345 | 28,715 | 80,060 |
| | \$ 53,615 | \$ 32,204 | \$ 85,819 |
| | | | |

The Certificates are also collateralized by certain assets purchased and/or constructed under the MLPA. The related net book value of the assets that collateralize the Certificates at December 31, 1997 is as follows (amounts expressed in thousands):

| Restricted investments | \$ 5,958 |
|-------------------------------|-----------|
| Utility plant in service | 75,553 |
| Less-accumulated depreciation | (10.067) |
| | \$ 71,444 |
| | |

(5) PROPERTY UNDER CAPITAL LEASE

On July 21, 1992, the Board entered into an agreement amending the lease agreement of March 3, 1987 with the Colorado River Water Conservation District ("District") whereby the District was required to construct Ritschard Dam and Wolford Mountain Reservoir ("Wolford") on Muddy Creek, a tributary of the Colorado River north of Kremmling, Colorado. In consideration of quarterly and semiannual lease payments for 27 years beginning after issuance of a notice of award for construction and payments of 40% of the annual operating costs of Wolford beginning after the end of the lease term, the District will convey to the Board at the end of the lease term ownership, use, and control of 40% of the storage capacity of Wolford and 40% of the water right. The present value of the minimum lease payments at the beginning of the lease term, including a \$2.4 million nonrefundable deposit, was \$43 million, and the Board recorded an asset and obligation under capital lease of that amount. The project was completed in the fall of 1995.

Minimum capital lease payments during 1997 totaled \$3,000,000. The following is a schedule by year of future minimum lease payments, together with the present value of the minimum lease payments as of December 31, 1997 (amounts expressed in thousands):

| \$ 3,000 |
|-----------|
| 3,000 |
| 3,000 |
| 3,000 |
| 3,000 |
| 52,500 |
| |
| 67,500 |
| |
| (33,035) |
| |
| |
| 34,465 |
| (685) |
| |
| \$ 33,780 |
| |
| |

(6) <u>DEFERRED COMPENSATION PLAN</u>

The Board has a deferred compensation plan for its employees, created in accordance with Internal Revenue Code Section 457. The plan, available to all permanent employees, permits them to defer a portion of their salary until future years. The deferred compensation is not available to employees until termination, retirement, death, or qualifying unforeseeable emergency. Participation in the plan is voluntary. The Board does not make any contributions. The Board has no liability for losses under the plan but does have the usual fiduciary responsibilities of a plan sponsor.

Prior to January 1, 1997, all amounts of compensation deferred under the plan, all property and rights purchased with those amounts, and all income attributable to those amounts, property, or rights ("plan assets") were (until paid or made available to the employee or other beneficiary) solely the property and rights of the Board (without being restricted to the provisions of benefits under the plan), subject only to the claims of the Board's general creditors. Participants' rights under the plan were equal to those of general creditors of the Board in an amount equal to the fair market value of the deferred account for each participant.

Effective January 1, 1997, Internal Revenue Code Section 457 was amended to require all plan assets to be held in qualified trust, custodial account, or annuity contract for the benefit of participants and their beneficiaries. To meet these requirements, non-annuity plan assets were transferred to a bank custodial account for the benefit of participants and their beneficiaries, and are therefore no longer considered property of the Board and cannot be used to satisfy creditor claims. In accordance with GASB Statement No. 32, "Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans," the deferred compensation assets and associated liabilities were removed from the 1997 balance sheet.

(7) BONDS PAYABLE

Bonds payable consists of general obligation water improvement and refunding bonds of the City. The Board is committed to repay the bonds and related interest from its revenues. Interest rates for the bonds outstanding at December 31, 1997, range from 1.0% to 9.0%. The average interest rate on all outstanding bonds was 5.56% for the years ended December 31, 1997 and 1996. A summary of debt maturity for the bonds as of December 31, 1997, is as follows (amounts expressed in thousands):

| Year of Maturity: | |
|-----------------------------------|------------|
| - | ф. 40 com |
| Current: | \$ 18,685 |
| | |
| Long-term: | |
| 1999 | 18,255 |
| 2000 | 16,250 |
| 2001 | 13,500 |
| 2002 | 12,890 |
| After 2002 | 163,625 |
| | |
| | 224,520 |
| Plus premium, net of discount | 7 |
| Less deferred amount on refunding | (1,826) |
| | |
| Total long-term | 222,701 |
| | \$ 241,386 |
| | Ψ 211,300 |
| | |

In prior years, the Board defeased certain City General Obligation bonds in order to reduce its total debt service payments and to obtain an economic gain (difference between the present values of the old and new debt service payments) by placing the proceeds of new bonds in an irrevocable trust to provide for all future debt service payments on the old bonds. Accordingly, the trust account assets and the liability for the defeased bonds are not included in the Board's financial statements. The advance refundings resulted in a difference between the reacquisition price and the net carrying amount of the old debt, the "deferred amount on refunding." This difference, reported in the accompanying financial statements as a deduction from bonds payable, is being amortized as a component of interest expense. At December 31, 1997, \$29,080,000 of bonds outstanding are considered defeased.

(8) DEFINED BENEFIT PENSION PLAN

Plan Description

The Board sponsors and administers a trusteed, single-employer defined benefit pension plan, the Employees' Retirement Plan of the Denver Board of Water Commissioners ("Plan"). The Plan provides retirement benefits with limited annual cost-of-living adjustments to substantially all regular full-time employees of the Board and their beneficiaries. It also provides retirement benefits in the event of total and permanent disability, and a \$5,000 death benefit. Article IV, Chapter C4.19 of the Charter of the City and County of Denver, Colorado assigns the authority to establish and amend benefit provisions to the Board; however, any amendment which substantially impairs the property rights of employees will not become effective until approved by two-thirds of the employees. The Plan issues a publicly available financial report that includes financial statements and required supplementary information for the Plan. That report may be obtained by writing to: Director of Finance, Denver Water, 1600 West 12th Avenue, Denver, CO 80254.

Funding Policy

The Contribution requirements of plan members and the Board are established and may be amended by the Board, which acts as trustee of the Plan. The Plan's funding policy provides for periodic Board contributions at actuarially determined amounts sufficient to accumulate the necessary assets to pay benefits when due. These required contributions may vary and are not expressed in terms of fixed dollar amounts or as percentages of annual covered payroll. Plan members are not required to make contributions, but may elect to make voluntary after-tax contributions to the Plan for the purpose of purchasing an additional monthly benefit. The additional benefit is in the form of a monthly annuity with no cost of living adjustment. The Board intends to continue making annual contributions to the Plan based on current annual actuarial valuations, but reserves the right to suspend, reduce or permanently discontinue all contributions at any time, pursuant to the termination provisions of the Plan.

Annual Pension Cost

The Board's annual pension cost for 1997 was \$5,044,620, equal to the Board's required and actual contributions. The required contribution was determined as part of the January 1, 1997 actuarial valuation using the entry age actuarial cost method. The actuarial assumptions included (a) 8% investment rate of return (net of administrative expenses), (b) projected salary increases ranging from 5.0% to 12.2% per year, and (c) 5% per year cost-of-living adjustments for members terminating or retiring before September 1, 1995, and 4.4% per year for members terminating or retiring on or after September 1, 1995. Salary increases include an inflation component of 5.0%. The actuarial value of Plan assets was determined using techniques that smooth the effects of short-term volatility in the market value of investments over a three-year period. The Plan's unfunded actuarial accrued liability is being amortized in level dollar amounts on a closed basis. The remaining amortization period at January 1, 1997 was 28 years.

Trend Information

Three-year trend information for the Board's pension cost and contributions is as follows (amounts expressed in thousands):

| Year | Cos | t (APC) | Contributed | Obliga | ation_ |
|------|-----|---------|-------------|--------|--------|
| 1995 | \$ | 6,047 | 100% | \$ | _ |
| 1996 | \$ | 5,857 | 100% | \$ | - |
| 1997 | \$ | 5,044 | 100% | \$ | - |

A Schedule of Funding Progress for the Plan is as follows (amounts expressed in thousands):

| Actuarial | Value of | Lia | bility (AAL) | AAL | Funded | Covered | Percentage of |
|-----------|-----------|-----|--------------|-----------|--------|----------|-----------------|
| Valuation | Assets | | Entry Age | (UAAL) | Ratio | Payroll | Covered Payroll |
| Date | (a) | | (b) | (b-a) | (a/b) | (c) | [(b-a)/c] |
| | | | | | | | |
| 1/1/95 | \$ 97,599 | \$ | 129,051 | \$ 31,452 | 75.6% | \$41,573 | 75.7% |
| 1/1/96 | \$110,713 | \$ | 137,877 | \$ 27,164 | 80.3% | \$41,182 | 66.0% |
| 1/1/97 | \$124,913 | \$ | 145,404 | \$ 20,491 | 85.9% | \$42,142 | 48.6% |

(9) RISK MANAGEMENT

The Board is exposed to various risks of losses including general liability (limited under the Colorado Governmental Immunity Act to \$150,000 per person and \$600,000 per occurrence), property damage, and employee life, medical, dental, and accident benefits. The Board has a risk management program that includes self-insurance for liability and selective property damage, and self-insurance for employee medical and dental benefits through a commercial claims servicer. The

NOTES TO FINANCIAL STATEMENTS (Continued)

Years Ended December 31, 1997 and 1996

Board carries commercial property insurance for catastrophic losses, including floods and earthquakes, for four major facilities: the Westside Complex, Marston Treatment Plant and Lab, Moffat Treatment Plant, and the Foothills Water Treatment Plant. The Board also carries commercial insurance for employee life, accident, and workers' compensation. Employee life and workers' compensation insurance are under retrospectively rated policies whereby the initial premiums are adjusted based on actual experience during the period of coverage. Settled claims have not exceeded commercial insurance coverage in any of the past three years.

Claims expenses and liabilities are reported when it is probable that a loss has occurred and the amount of that loss can be reasonably estimated. Premiums on retrospectively rated policies are accrued based on the ultimate cost of the experience to date. These losses include an estimate of claims that have been incurred but not reported. At December 31, 1997, claims liabilities consisting of workers' compensation, medical and dental benefits, and employee life insurance were \$1,389,000. Changes in the balances of these liabilities during 1996 and 1997 were as follows (amounts expressed in thousands):

| | | of | inning- -Year ability | Clai Cha | ent-Year ms and nges in imates | Claim yments | ance at ar-End |
|----|-----|----|-----------------------------|-------------|---|-----------------|-------------------|
| 19 | 996 | \$ | 2,276 | \$ | 4,203 | \$ (5,118) | \$ 1,361 |
| 19 | 997 | \$ | 1,361 | \$ | 4,364 | \$ (4,336) | \$ 1,389 |

The Board has designated \$4 million of its investments as available for claims covered by self-insurance.

(10) POSTRETIREMENT BENEFITS

As part of the retirement program revisions instituted in 1995, the Board, under authority of the City Charter, established a postretirement health care benefit in the form of a \$125 fixed monthly subsidy for medical, dental, or vision insurance coverage obtained through the Board's health plan to all employees taking early retirement. The subsidy begins with the first pension payment and continues until the retiree reaches age 65 or until pension payments cease, whichever is earlier. The subsidy is not written in the retirement plan or paid out of retirement plan funds and can only be used each month to offset part or all of that month's cost of insurance coverage. Currently, 51 retirees are eligible to receive this benefit. Expenses of this program are recognized as incurred, which amounted to \$59,000 and \$36,000 during 1997 and 1996, respectively.

(11) <u>SOUTH ADAMS COUNTY WATER AND SANITATION DISTRICT ("SACWSD") SYSTEM DEVELOPMENT</u> CHARGES

On December 23, 1997, the Board and SACWSD entered into a Memorandum of Understanding ("MOU") whereby the Board will supply 4,000 acre-feet of treated water annually to SACWSD, beginning on or before October 1, 2004, for which SACWSD paid \$22,920,000. The MOU is contingent upon SACWSD's acquiring, developing, and conveying to the Board storage facilities for 8,000 acre-feet of water along the South Platte River downstream of Denver, and total costs under the MOU not exceeding \$46 million. If the contingency is not met, SACWSD may, at its discretion, terminate the MOU, and the Board will reimburse the \$22,920,000 payment. The Board recorded the payment in Restricted Investments and Customer Advances for Construction. When the contingency is no longer in effect, the \$22,920,000 will be removed from Restricted Investments and transferred from Customer Advances for Construction to System Development Charges.

(12) YEAR 2000 (Unaudited)

The Board utilizes software and related technologies within its business processes that may be impacted by the year 2000 issue. The year 2000 issue exists because many computer systems and applications currently use two digit date fields to designate a year. Date sensitive systems may recognize the year 2000 as 1900, or not at all. This inability to properly treat the year 2000 could cause systems to process critical financial and operational information incorrectly.

The Board has completed its initial assessment of all currently used systems and developed a plan to correct the systems that will be affected. The Board continues to evaluate appropriate courses of corrective action, including the replacement of certain systems. In addition, the Board is relying on outside vendors to provide new system upgrades to mitigate the year 2000 issue.

If such modifications and conversions are not completed timely, the year 2000 issue may have a material impact on the operations of the Board. Management does not anticipate these activities will have a material adverse impact on the financial position, results of operations or cash flows of the Board.

SUPPLEMENTAL INFORMATION

PROPERTY, PLANT AND EQUIPMENT For the Year Ended December 31, 1997 (amounts expressed in thousands)

| | | | Cost Accumulated Depreciation and Amortization | | | | | | | | | | |
|-------------------------------------|---------------------------------|----------------------------------|--|-----------------------|----------------------------------|----------------------------------|-----------|--|----------------------------------|--------------------------------------|--|--|--|
| | Depreciation Life (Years) | Balance, December 31, 1996 | Additions and Transfers | Sales and Retirements | Balance, December 31, 1997 | Balance, December 31, 1996 | Provision | Sales, Retirements and Transfers | Balance, December 31, 1997 | Amortization as of December 31, 1997 | | | |
| UTILITY PLANT IN SERVICE: | | | | | | | | | | | | | |
| Source of supply plant | 10 - 80 | \$ 336,872 | \$ 11,205 | \$ (465) | \$ 347,612 | \$ 82,195 | \$ 4,215 | \$ (48) | \$ 86,362 | \$ 261,250 | | | |
| Pumping plant | 20 - 80 | 30,865 | 2,231 | (146) | 32,950 | 9,839 | 633 | (110) | 10,362 | 22,588 | | | |
| Water treatment plant | 20 - 80 | 193,707 | (1,418) | (72) | 192,217 | 38,758 | 3,521 | (87) | 42,192 | 150,025 | | | |
| Transmission and distribution plant | 30 - 80 | 517,000 | 19,541 | (243) | 536,298 | 102,201 | 7,692 | (10) | 109,883 | 426,415 | | | |
| General plant and equipment | 5 - 50 | 67,285 | 6,441 | (1,410) | 72,316 | 30,956 | 4,429 | (1,209) | 34,176 | 38,140 | | | |
| Leasehold and other improvements | 5 - 10 | 3,570 | 2,188 | | 5,758 | 1,321 | 400 | | 1,721 | 4,037 | | | |
| Land held for future use | | 14,444 | | (8) | 14,436 | | | | | 14,436 | | | |
| Total utility plant in service | | 1,163,743 | 40,188 | (2,344) | 1,201,587 | 265,270 | 20,890 | (1,464) | 284,696 | 916,891 | | | |
| NONUTILITY PLANT IN SERVICE: | | | | | | | | | | | | | |
| Plant | 10 - 80 | 6.811 | 127 | | 6,938 | 2,273 | 91 | | 2,364 | 4,574 | | | |
| General equipment | 10 - 20 | 93 | 8 | (1) | 100 | 32 | 8 | | 40 | 60 | | | |
| Total nonutility plant in service | | 6,904 | 135 | (1) | 7,038 | 2,305 | 99 | | 2,404 | 4,634 | | | |
| UTILITY PLANT UNDER CAPITAL LEASE | 80 | 42,981 | | | 42,981 | 672 | 537 | | 1,209 | 41,772 | | | |
| CONSTRUCTION IN PROGRESS | | 23,115 | 7,341 | | 30,456 | | | | | 30,456 | | | |
| Total property, plant and equipment | | \$ 1,236,743 | \$ 47,664 | \$ (2,345) | \$ 1,282,062 | \$ 268,247 | \$ 21,526 | \$ (1,464) | \$ 288,309 | \$ 993,753 | | | |

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GENERAL OBLIGATION WATER IMPROVEMENT AND REFUNDING BONDS Outstanding at December 31, 1997

EXHIBIT II-A

(amounts expressed in thousands)

| | Interest | | | | | | |
|------------------|-------------------|-----------|------------|-------------------|-----------|-------------------|---------------|
| | Rates on Bonds | | | | Во | onds Which Are Ca | allable |
| Date of | Outstanding as of | | Amount | | Callable | | Initial Date |
| Issue | December 31, 1997 | Issued | Retired | Outstanding | Amount | Bond Nos.** | Callable |
| | | | | | | | |
| Nov 1, 1959 | 1.00-3.70% | \$ 17,000 | \$ 16,040 | \$ 960 | \$ 960 | 16,041-17,000 | Nov. 1, 1979 |
| Apr 1, 1961 | 3.50% | 15,000 | 13,180 | 1,820 | 1,820 | 13,181-15,000 | Apr. 1, 1981 |
| Apr 1, 1962 | 3.30% | 15,000 | 13,680 | 1,320 | 1,320 | 2,737-3,000 | Apr. 1, 1982 |
| Jun 1, 1964 | 3.30-3.40% | 10,000 | 9,000 | 1,000 | 1,000 | 1,801-2,000 | June 1, 1984 |
| May 1, 1966* | 3.50% | 6,290 | 5,490 | 800 | 800 | 1,099-1,258 | May 1, 1986 |
| Jan 1, 1977* | 5.45-6.40% | 5,900 | | 5,900 | 5,900 | 1-1,180 | July 1, 1990 |
| Jan 1, 1977* | 5.20-5.60% | 3,200 | | 3,200 | 3,200 | 1- 640 | Jan 1, 1990 |
| | | | | | | | |
| Sep 1, 1992* | 5.75-5.90% | 16,060 | 2.770 | 16,060 | 16,060 | Regstrd. | Sept. 1, 2002 |
| Mar 1, 1993* | 4.50-6.00% | 59,600 | 2,770 | 56,830 | 49,045 | Regstrd. | Sept. 1, 2001 |
| Sep 1, 1993* | 4.80-5.10% | 15,600 | | 15,600 | 15,600 | Regstrd. | Sept. 1, 2003 |
| Jun 15, 1994* | 5.00-7.00% | 131,835 | 40,950 | 90,885 | 35,895 | Regstrd. | Oct. 1, 2003 |
| Sept. 15, 1995* | 4.75-5.00% | 12,825 | | 12,825 | 6,000 | Regstrd. | Oct. 1, 2005 |
| Sept. 15, 1996* | 4.20-9.00% | 16,975 | 500 | 16,475 | 7,330 | Regstrd. | Oct. 1, 2006 |
| Aug. 1, 1997* | 4.40-5.50% | 19,530 | | 19,530 | 11,900 | Regstrd. | Oct. 1, 2007 |
| <i>C</i> , | | \$344,815 | \$ 101,610 | 243,205 | \$156,830 | C | |
| Plus premium, ne | et of discount | | | 7 | | | |
| Less deferred am | ount on refunding | | | (1,826) | | | |
| | | | | ф. 241 205 | | | |
| | | | | \$ 241,386 | | | |

^{*} Refunding Serial Issue.

^{**} Callable Bonds are redeemable in inverse serial order.

SUMMARY OF DEBT SERVICE REQUIREMENTS

EXHIBIT II-B

Outstanding at December 31, 1997 Years 1998 to 2012 Inclusive (amounts expressed in thousands)

| <u>Year</u> | | Bond tirements hibit II-C) | I | Bond nterest nibit II-D) | De | Total bt Service |
|-----------------------------------|-------------|----------------------------------|----|--------------------------------|----|---------------------|
| 1000 | \$ | 10 605 | Ф | 10.741 | ď | 21 426 |
| 1998 | > | 18,685 | \$ | 12,741 | \$ | 31,426 |
| 1999 | | 18,255 | | 11,695 | | 29,950 |
| 2000 | | 16,250 | | 10,639 | | 26,889 |
| 2001 | | 13,500 | | 9,864 | | 23,364 |
| 2002 | | 12,890 | | 9,209 | | 22,099 |
| | | | | | | |
| 2003 | | 13,265 | | 8,574 | | 21,839 |
| 2004 | | 14,030 | | 7,904 | | 21,934 |
| 2005 | | 22,940 | | 7,196 | | 30,136 |
| 2006 | | 20,145 | | 6,020 | | 26,165 |
| 2007 | | 25,215 | | 4,967 | | 30,182 |
| | | | | | | |
| 2008 | | 23,550 | | 3,624 | | 27,174 |
| 2009 | | 15,770 | | 2,319 | | 18,089 |
| 2010 | | 21,380 | | 1,513 | | 22,893 |
| 2011 | | 4,430 | | 380 | | 4,810 |
| 2012 | | 2,900 | | 149 | | 3,049 |
| | | <u> </u> | | | | |
| Total | | 243,205 | | 96,794 | | 339,999 |
| Plus premium, net of discount | | 7 | | , | | 7 |
| Less deferred amount on refunding | | (1,826) | | | | (1,826) |
| | | ()- =/ | | | | ()- ") |
| | \$ | 241,386 | \$ | 96,794 | \$ | 338,180 |

SCHEDULE OF BOND RETIREMENTS

EXHIBIT II-C

For Bonds Outstanding at December 31, 1997 Years 1998 to 2012 Inclusive (amounts expressed in thousands)

| | Series | Series | Series | Series | | eries 1966 | | Series 1977 | | Series 1978 | Series 1992 | Series 1993A | Series 1993B | Series 1994 | Series 1995 | Series 1996 | Series 1997 | | |
|------|--------|--------|--------|--------|-----|---------------|----|----------------|----|----------------|----------------|---------------------|-----------------|----------------|----------------|----------------|----------------|-----------|--|
| Voor | 1959 | 1961 | 1962 | 1964 | | unding | | funding | | funding | Refunding | Refunding | Refunding | | | | Refunding | Total | |
| Year | 1939 | 1901 | 1902 | 1904 | Kei | unung | Ke | Tullullig | Ke | runung | Kerunding | Kerunding Kerunding | | Refunding | Refunding | Refunding | Kerunding | Total | |
| 1998 | \$ 960 | \$ 910 | \$ 660 | \$ 500 | \$ | 400 | \$ | 400 | \$ | 200 | | \$ 3,125 | | \$ 10,870 | | \$ 660 | | \$ 18,685 | |
| 1999 | | 910 | 660 | 500 | | 400 | | 1,000 | | 500 | | 1,825 | | 11,550 | | 910 | | 18,255 | |
| 2000 | | | | | | | | 1,000 | | 500 | | 2,050 | | 10,765 | 1,000 | 935 | | 16,250 | |
| 2001 | | | | | | | | 1,000 | | 500 | | 785 | | 9,135 | 1,100 | 980 | | 13,500 | |
| 2002 | | | | | | | | 1,000 | | 500 | | 2,020 | | 6,180 | 1,165 | 1,025 | 1,000 | 12,890 | |
| 2003 | | | | | | | | 1,500 | | 500 | | 1,425 | | 6,490 | 1,175 | 1,075 | 1,100 | 13,265 | |
| 2004 | | | | | | | | -, | | 500 | | 3,155 | | 6,810 | 1,185 | 1,130 | 1,250 | 14,030 | |
| 2005 | | | | | | | | | | 200 | | 12,045 | | 7,180 | 1,200 | 1,185 | 1,330 | 22,940 | |
| 2006 | | | | | | | | | | | 500 | 9,365 | 300 | 7,335 | 1,200 | 1,245 | 1,400 | 20,145 | |
| 2007 | | | | | | | | | | | 3,600 | 15,370 | 2,200 | 1,210 | | 1,285 | 1,550 | 25,215 | |
| 2008 | | | | | | | | | | | 11,960 | 5,665 | 1,800 | 1,010 | | 1,415 | 1,700 | 23,550 | |
| 2009 | | | | | | | | | | | 11,500 | 2,002 | 11,300 | 1,010 | | 1,460 | 2,000 | 15,770 | |
| 2010 | | | | | | | | | | | | | , | 11,340 | 6,000 | 1,540 | 2,500 | 21,380 | |
| 2011 | | | | | | | | | | | | | | , | -, | 1,630 | 2,800 | 4,430 | |
| 2012 | | | | | | | | | | | | | | | | | 2,900 | 2,900 | |
| | \$ 960 | ##### | ##### | ##### | \$ | 800 | \$ | 5,900 | \$ | 3,200 | \$ 16,060 | \$ 56,830 | \$ 15,600 | \$ 90,885 | \$ 12,825 | \$ 16,475 | \$ 19,530 | \$243,205 | |

SCHEDULE OF BOND INTEREST For Bonds Outstanding at December 31, 1997 Years 1998 to 2012 Inclusive EXHIBIT II-D

(amounts expressed in thousands)

| | Series | Series | Series | Series | eries 966 | eries .977 | | Series 1978 | | Series Series 1978 1992 | | Series 1993A | | Series 993B | Series 1994 | | Series 1995 | | Series 1996 | | Series 1997 | | |
|------|--------|--------|--------|--------|--------------|---------------|----|----------------|------|----------------------------|-----------|-----------------|-------|----------------|----------------|-----------|----------------|-----------|----------------|-----------|----------------|-----------|--|
| Year | 1959 | 1961 | 1962 | 1964 | unding | unding | | Refunding | | unding | Refunding | Refunding | | Refunding | | Refunding | | Refunding | | Refunding | | Total | |
| 1998 | \$ 10 | \$ 48 | \$ 33 | \$ 25 | \$ 21 | \$ 327 | \$ | 171 | \$ | 945 | \$ 2,928 | \$ | 792 | \$ | 4,870 | \$ | 633 | \$ | 818 | \$ | 1,120 | \$ 12,741 | |
| 1999 | | 16 | 11 | 8 | 7 | 302 | | 160 | | 945 | 2,744 | | 793 | | 4,326 | | 633 | | 791 | | 959 | 11,695 | |
| 2000 | | | | | | 247 | | 132 | | 945 | 2,662 | | 792 | | 3,518 | | 633 | | 751 | | 959 | 10,639 | |
| 2001 | | | | | | 192 | | 106 | | 945 | 2,567 | | 793 | | 3,007 | | 586 | | 709 | | 959 | 9,864 | |
| 2002 | | | | | | 138 | | 80 | | 945 | 2,530 | | 792 | | 2,568 | | 533 | | 664 | | 959 | 9,209 | |
| 2003 | | | | | | 82 | | 54 | | 945 | 2,433 | | 793 | | 2,259 | | 477 | | 615 | | 916 | 8,574 | |
| 2004 | | | | | | | | 27 | | 945 | 2,363 | | 792 | | 1,928 | | 419 | | 564 | | 866 | 7,904 | |
| 2005 | | | | | | | | | | 945 | 2,206 | | 793 | | 1,574 | | 360 | | 508 | | 810 | 7,196 | |
| 2006 | | | | | | | | | | 945 | 1,591 | | 793 | | 1,193 | | 300 | | 449 | | 749 | 6,020 | |
| 2007 | | | | | | | | | | 916 | 1,104 | | 778 | | 799 | | 300 | | 387 | | 683 | 4,967 | |
| 2008 | | | | | | | | | | 706 | 297 | | 668 | | 734 | | 300 | | 321 | | 598 | 3,624 | |
| 2009 | | | | | | | | | | | | | 576 | | 679 | | 300 | | 248 | | 516 | 2,319 | |
| 2010 | | | | | | | | | | | | | | | 624 | | 300 | | 170 | | 419 | 1,513 | |
| 2011 | | | | | | | | | | | | | | | | | | | 88 | | 292 | 380 | |
| 2012 | | | | | | | | | | | | | | | | | | | | | 149 | 149 | |
| | \$ 10 | \$ 64 | \$ 44 | \$ 33 | \$ 28 | \$ 1,288 | \$ | 730 | \$ 1 | 10,127 | \$ 23,425 | \$ | 9,155 | \$ | 28,079 | \$ | 5,774 | \$ | 7,083 | \$ | 10,954 | \$ 96,794 | |

STATISTICAL SUMMARY: 1988 - 1997

| | 1997 | 1996 | 1995 | 1994 | 1993 | 1992 | 1991 | 1990 | 1989 | 1988 |
|--|-------------|--------------|--------------|--------------|--------------|--------------|--------------|------------|------------|------------|
| Population Served ¹ | 957,000 | 945,000 | 952,000 | 947,000 | 928,000 | 912,000 | 908,000 | 891,000 | 887,000 | 879,000 |
| Total Treated Water Delivered/Consumption in Million Gallons | 75,363.33 | 76,203.96 | 65,267.91 | 76,516.08 | 72,562.61 | 73,043.27 | 67,435.91 | 72,043.94 | 77,262.29 | 78,718.55 |
| Average Day Treated Water Use Rate (MGD) ² | 206.47 | 208.21 | 178.82 | 209.63 | 198.80 | 199.57 | 184.76 | 197.38 | 211.68 | 215.67 |
| Average Consumption per Capita per Day in Gallons | 216 | 220 | 188 | 221 | 214 | 219 | 203 | 222 | 239 | 245 |
| Maximum Day Treated Water Use Rate (MGD) ² | 517.57 | 456.99 | 453.55 | 479.01 | 438.20 | 414.11 | 414.79 | 507.12 | 553.28 | 477.65 |
| Maximum Hour Treated Water Use Rate (MGD) ² | 712.48 | 736.53 | 565.13 | 717.57 | 661.80 | 643.60 | 599.82 | 713.04 | 808.85 | 706.09 |
| Treated Water Pumped in Million Gallons | 34,179.67 | 39,578.30 | 32,115.03 | 40,720.24 | 35,826.13 | 32,613.51 | 29,349.37 | 26,089.81 | 27,724.95 | 22,870.50 |
| Raw Water Storage Capacity in Acre-Feet | 545,476 | 545,476 | 545,476 | 545,476 | 545,476 | 545,476 | 546,164 | 543,141 | 543,141 | 543,141 |
| Replacement Reservoir Storage Capacity in Acre-Feet | 96,822 | 96,822 | 96,822 | 96,822 | 96,822 | 96,822 | 96,822 | 96,822 | 96,822 | 96,822 |
| Supply from South Platte River in Acre-Feet ³ | 194,478 | 131,242 | 178,286 | 134,116 | 117,914 | 131,341 | 125,705 | 127,429 | 128,422 | 173,097 |
| Supply from Moffat System in Acre-Feet | 77,630 | 60,520 | 69,271 | 45,782 | 38,468 | 49,984 | 67,558 | 75,840 | 67,073 | 80,602 |
| Supply from Blue River/Roberts Tunnel System in Acre-Feet | 92,174 | 89,268 | 98,176 | 90,479 | 135,770 | 89,573 | 83,681 | 76,131 | 85,936 | 58,564 |
| Treated Water Pumping Capacity in MGD ² | 1,027.5 | 1,027.5 | 1,116.8 | 1,116.8 | 1,091.8 | 1,091.8 | 1,091.8 | 1,091.8 | 1,156.8 | 1,156.8 |
| Raw Water Pumping Capacity in MGD ² | 92.2 | 92.2 | 92.2 | 92.2 | 92.2 | 92.2 | 92.2 | 92.2 | 92.2 | 92.2 |
| Treatment Plant Capacity in MGD ² | 645.0 | 645.0 | 645.0 | 645.0 | 645.0 | 645.0 | 645.0 | 645.0 | 715.0 | 715.0 |
| Treated Water Reservoir Capacity in Million Gallons | 400.5 | 408.2 | 408.2 | 408.2 | 393.2 | 393.2 | 393.2 | 372.0 | 375.0 | 377.0 |
| Supply Mains in Miles (Mountain Collection System) | 77.6 | 77.6 | 77.6 | 77.6 | 77.6 | 77.6 | 77.6 | 77.6 | 77.6 | 77.6 |
| Supply Mains in Miles (Metropolitan Denver Area) | 39.2 | 39.2 | 39.3 | 39.3 | 39.3 | 39.3 | 39.3 | 39.3 | 39.3 | 39.3 |
| T&D Mains in Miles (Inside Denver and Total | | | | | | | | | | |
| Service Contract Distributors) | 2,486.1 | 2,464.0 | 2,442.6 | 2,377.6 | 2,362.8 | 2,355.6 | 2,343.4 | 2,328.4 | 2,321.0 | 2,309.3 |
| Nonpotable Transmission and Distribution Mains in Miles | 15.6 | 14.7 | 14.6 | - | - | - | - | - | - | - |
| Total Active Taps-End of Year ¹ | 271,338 | 268,676 | 271,999 | 268,506 | 265,233 | 262,184 | 259,695 | 258,096 | 256,587 | 255,559 |
| Fire Hydrants Operated & Maintained | 13,575 | 13,298 | 13,005 | 12,524 | 12,364 | 12,282 | 12,196 | 12,125 | 12,045 | 11,963 |
| Breaks in Mains - Denver | 251 | 200 | 147 | 222 | 239 | 206 | 225 | 225 | 235 | 196 |
| Service Leaks | 591 | 648 | 548 | 631 | 635 | 550 | 637 | 625 | 618 | 551 |
| Fire Hydrants Tested and Repaired | 26,188 | 14,894 | 18,086 | 16,195 | 14,823 | 19,689 | 22,981 | 20,931 | 18,526 | 15,810 |
| Employees (Authorized Staffing) | 1,032 | 1,030 | 1,031 | 1,063 | 1,068 | 1,086 | 1,109 | 1,089 | 1,088 | 1,036 |
| Financial Information ⁴ | | | | | | | | | | |
| Gross Property, Plant & Equipment | \$1,282,062 | \$ 1,236,743 | \$ 1,209,646 | \$ 1,173,637 | \$ 1,145,118 | \$ 1,117,889 | \$ 1,032,229 | \$ 976,327 | \$ 944,978 | \$ 915,031 |
| Net Property, Plant & Equipment (after depreciation) | \$ 993,753 | \$ 968,496 | \$ 959,945 | \$ 941,516 | \$ 926,511 | \$ 899,916 | \$ 830,229 | \$ 789,316 | \$ 771,064 | \$ 754,428 |
| Additions to Property, Plant & Equipment | \$ 47,664 | \$ 33,178 | \$ 38,491 | \$ 35,355 | \$ 48,543 | \$ 121,442 | \$ 82,362 | \$ 37,576 | \$ 37,000 | \$ 35,684 |
| Operating Revenues ⁵ | \$ 121,074 | \$ 118,580 | \$ 94,952 | \$ 100,992 | \$ 85,143 | \$ 81,637 | \$ 76,107 | \$ 78,511 | \$ 80,032 | \$ 81,053 |
| Operating Expenses ⁵ | \$ 93,202 | \$ 92,072 | \$ 86,742 | \$ 79,888 | \$ 78,651 | \$ 73,655 | \$ 72,156 | \$ 71,769 | \$ 62,185 | \$ 55,583 |
| Operating Income | \$ 27,872 | \$ 26,508 | \$ 8,210 | \$ 21,104 | \$ 6,492 | \$ 7,982 | \$ 3,951 | \$ 6,742 | \$ 17,847 | \$ 25,470 |
| Net Income (Loss) | \$ 19,198 | \$ 8,193 | \$ (6,883) | \$ 3,461 | \$ (11,115) | \$ (9,833) | \$ (8,202) | \$ (1,472) | \$ 11,690 | \$ 14,496 |
| Retained Earnings (Reinvested) | \$ 410,129 | \$ 384,448 | \$ 370,098 | \$ 371,225 | \$ 364,077 | \$ 370,080 | \$ 375,081 | \$ 378,681 | \$ 375,763 | \$ 359,881 |
| Total Long-Term Debt ⁶ | \$ 329,466 | \$ 334,618 | \$ 340,598 | \$ 346,806 | \$ 349,585 | \$ 350,885 | \$ 311,175 | \$ 269,306 | \$ 283,275 | \$ 281,680 |

¹Population estimates based on treated water customers only. Beginning in 1996, population served and active taps exclude the City of Broomfield.

²MGD = Million Gallons per Day.

³Supply includes effluent exchanges.

⁴Amounts expressed in thousands.

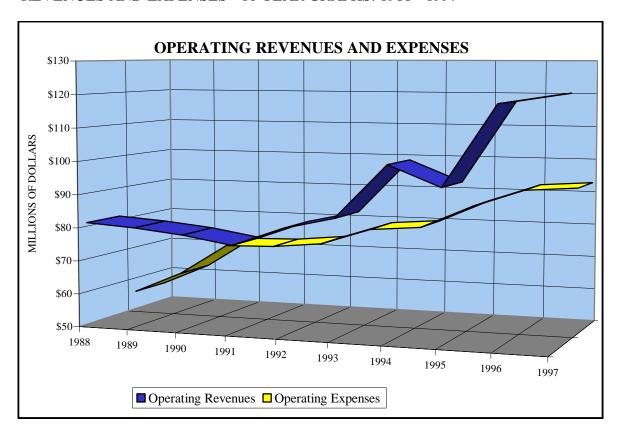
⁵See "Detail of Revenues and Expenses."

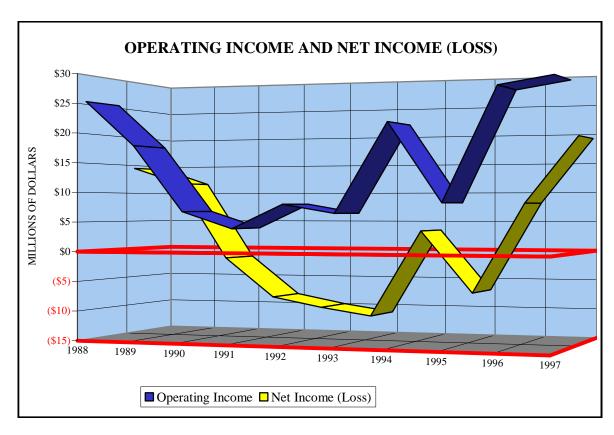
⁶Includes current and long-term portions of bonds payable, certificates of participation, and obligations under capital lease, net of discounts, premiums and deferred losses on advance refundings.

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DETAIL OF REVENUES AND EXPENSES: 1988 - 1997 (amounts expressed in thousands)

| OPERATING REVENUES: | <u>1997</u> | <u>1996</u> | <u>1995</u> | <u>1994</u> | <u>1993</u> | <u>1992</u> | <u>1991</u> | <u>1990</u> | <u>1989</u> | <u>1988</u> |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Water | \$ 116,884 | \$ 114,635 | \$ 91,051 | \$ 97,920 | \$ 82,300 | \$ 78,966 | \$ 73,752 | \$ 76,206 | \$ 77,749 | \$ 79,006 |
| Power generation and other | 4,190 | 3,945 | 3,901 | 3,072 | 2,843 | 2,671 | 2,355 | 2,305 | 2,283 | 2,047 |
| 1 ower generation and other | | 3,713 | 3,701 | 3,072 | 2,013 | | | 2,303 | 2,203 | 2,017 |
| Total operating revenues | 121,074 | 118,580 | 94,952 | 100,992 | 85,143 | 81,637 | 76,107 | 78,511 | 80,032 | 81,053 |
| OPERATING EXPENSES: | | | | | | | | | | |
| Water service- | | | | | | | | | | |
| Source of supply, pumping, | | | | | | | | | | |
| treatment and distribution | 40,266 | 38,046 | 35,173 | 30,795 | 29,716 | 28,677 | 29,605 | 29,430 | 22,905 | 20,750 |
| General and administrative | 25,236 | 26,836 | 26,958 | 25,522 | 24,810 | 21,988 | 22,212 | 21,446 | 19,322 | 16,829 |
| Depreciation and amortization | 21,047 | 21,047 | 18,890 | 17,447 | 16,704 | 16,013 | 13,178 | 12,603 | 11,716 | 11,074 |
| Customer service | 6,653 | 6,143 | 5,721 | 6,124 | 5,867 | 4,836 | 4,576 | 4,202 | 3,845 | 3,548 |
| | | | | | | | | | | |
| Total water service | 93,202 | 92,072 | 86,742 | 79,888 | 77,097 | 71,514 | 69,571 | 67,681 | 57,788 | 52,201 |
| | | | | | | | | | | |
| Reuse demonstration plant- | | | | | | | | | | |
| Operations and maintenance | - | - | - | - | 60 | 463 | 892 | 2,390 | 2,690 | 1,720 |
| Depreciation and amortization | - | | | | 1,494 | 1,678 | 1,693 | 1,698 | 1,707 | 1,662 |
| Total reuse demonstration plant | - | - | - | - | 1,554 | 2,141 | 2,585 | 4,088 | 4,397 | 3,382 |
| | | | | | | | | | | - |
| Total operating expenses | 93,202 | 92,072 | 86,742 | 79,888 | 78,651 | 73,655 | 72,156 | 71,769 | 62,185 | 55,583 |
| OPERATING INCOME | 27,872 | 26,508 | 8,210 | 21,104 | 6,492 | 7,982 | 3,951 | 6,742 | 17,847 | 25,470 |
| OI ERTITIVO INCOME | | | 0,210 | 21,104 | 0,472 | 7,702 | 3,751 | 0,742 | 17,047 | 23,470 |
| NONOPERATING REVENUES (EXPENSES): | | | | | | | | | | |
| Interest income | 5,958 | 4,417 | 4,498 | 2,972 | 2,517 | 4,989 | 7,580 | 10,430 | 13,005 | 9,301 |
| Interest expense, less capitalized interest | (19,350) | (19,979) | (20,383) | (19,633) | (21,918) | (21,487) | (18,460) | (17,946) | (17,957) | (18,913) |
| Gain (loss) on disposition of | | | | | | | | | | |
| property, plant and equipment | 4,158 | (2,968) | (44) | (668) | 1,283 | (1,204) | (804) | (234) | (907) | (1,092) |
| Other income (expense), net | 560 | 215 | 836 | (314) | 511 | (113) | (469) | (464) | (298) | (270) |
| | | | | | | | | | | |
| Net nonoperating expenses | (8,674) | (18,315) | (15,093) | (17,643) | (17,607) | (17,815) | (12,153) | (8,214) | (6,157) | (10,974) |
| NET INCOME (LOSS) | \$ 19,198 | \$ 8,193 | \$ (6,883) | \$ 3,461 | \$ (11,115) | \$ (9,833) | \$ (8,202) | \$ (1,472) | \$ 11,690 | \$ 14,496 |
| () | = ,2,5 | - 0,270 | + (3,000) | - 5,.02 | + (-1,110) | + (>,000) | + (3,232) | - (1,1,2) | ,0/0 | |





Supply

1997 Facts

| Raw water collected | , | A.F. |
|------------------------------------|-------------|------|
| Percent of average yield | . 140% | |
| Percent from South Platte System | . 54% | |
| Percent from Moffat System | 21% | |
| Percent from Roberts Tunnel System | . 25% | |
| | | |
| Reservoir storage, January 1 | . 450,837 | A.F. |
| Percent of capacity | 83% | |
| Reservoir storage, December 31 | 494,510 | A.F. |
| Percent of capacity | 91% | |
| | | |
| Power generation | 56,568,690 | KWH |
| Value of power generation | \$2,029,787 | |

To View Page C-7 Please go to Table of Contents and Click on:

Supply Map of Raw Water Supply System

SOURCE OF SUPPLY - 1997

Reservoirs and Collection Systems

| Reservoirs and Concetion Systems | | |
|--|--|--|
| | Capacity in | Capacity in |
| RAW WATER STORAGE | Acre-Feet | Million Gals. |
| Storage Reservoirs: | | |
| Dillon | 254,036 | 82,777.9 |
| Eleven Mile Canyon | 97,779 | 31,861.4 |
| Cheesman | 79,064 | 25,763.1 |
| Gross | 41,811 | 13,624.1 |
| Antero | 20,015 | 6,521.9 |
| Chatfield | 11,060 | 3,603.9 |
| Soda Lakes (Board owns 35.16% of water) | 645 | 210.2 |
| Total Storage Reservoirs | 504,410 | 164,362.5 |
| Operating Reservoirs: | | |
| Marston Lake | 19,796 | 6,450.5 |
| Ralston | 10,749 | 3,502.6 |
| Strontia Springs | 7,864 | 2,562.5 |
| Long Lakes | 1,716 | 559.2 |
| Platte Canyon | 941 | 306.6 |
| Total Operating Reservoirs | 41,066 | 13,381.4 |
| . • | | |
| TOTAL RAW WATER STORAGE | 545,476 | 177,743.9 |
| REPLACEMENT RESERVOIR | | |
| Williams Fork | 96,822 | 31,549.5 |
| | | |
| MOLINITAIN COLLECTION SYSTEM | I anoth in Foot | Longth in Miles |
| MOUNTAIN COLLECTION SYSTEM Moffet Collection Systems | Length in Feet | Length in Miles |
| Moffat Collection System: | | - |
| Moffat Collection System: Concrete and Steel Pipe | 84,899 | 16.1 |
| Moffat Collection System: Concrete and Steel Pipe Moffat Water Tunnel | 84,899 32,383 | 16.1 6.1 |
| Moffat Collection System: Concrete and Steel Pipe Moffat Water Tunnel Open Canals | 84,899 32,383 26,373 | 16.1 6.1 5.0 |
| Moffat Collection System: Concrete and Steel Pipe Moffat Water Tunnel Open Canals Covered Canals | 84,899 32,383 26,373 23,807 | 16.1 6.1 5.0 4.5 |
| Moffat Collection System: Concrete and Steel Pipe Moffat Water Tunnel Open Canals Covered Canals Other Tunnels | 84,899 32,383 26,373 23,807 10,953 | 16.1 6.1 5.0 4.5 2.1 |
| Moffat Collection System: Concrete and Steel Pipe Moffat Water Tunnel Open Canals Covered Canals | 84,899 32,383 26,373 23,807 | 16.1 6.1 5.0 4.5 |
| Moffat Collection System: Concrete and Steel Pipe Moffat Water Tunnel Open Canals Covered Canals Other Tunnels | 84,899 32,383 26,373 23,807 10,953 | 16.1 6.1 5.0 4.5 2.1 |
| Moffat Collection System: Concrete and Steel Pipe Moffat Water Tunnel Open Canals Covered Canals Other Tunnels Total Moffat Collection System | 84,899 32,383 26,373 23,807 10,953 | 16.1 6.1 5.0 4.5 2.1 |
| Moffat Collection System: Concrete and Steel Pipe Moffat Water Tunnel Open Canals Covered Canals Other Tunnels Total Moffat Collection System Williams Fork Collection System: | 84,899 32,383 26,373 23,807 10,953 178,415 | 16.1 6.1 5.0 4.5 2.1 33.8 |
| Moffat Collection System: Concrete and Steel Pipe Moffat Water Tunnel Open Canals Covered Canals Other Tunnels Total Moffat Collection System Williams Fork Collection System: Steel Pipe | 84,899 32,383 26,373 23,807 10,953 178,415 | 16.1 6.1 5.0 4.5 2.1 33.8 |
| Moffat Collection System: Concrete and Steel Pipe Moffat Water Tunnel Open Canals Covered Canals Other Tunnels Total Moffat Collection System Williams Fork Collection System: Steel Pipe Vasquez Tunnel | 84,899 32,383 26,373 23,807 10,953 178,415 | 16.1 6.1 5.0 4.5 2.1 33.8 |
| Moffat Collection System: Concrete and Steel Pipe Moffat Water Tunnel Open Canals Covered Canals Other Tunnels Total Moffat Collection System Williams Fork Collection System: Steel Pipe Vasquez Tunnel A. P. Gumlick Tunnel | 84,899 32,383 26,373 23,807 10,953 178,415 | 16.1 6.1 5.0 4.5 2.1 33.8 |
| Moffat Collection System: Concrete and Steel Pipe Moffat Water Tunnel Open Canals Covered Canals Other Tunnels Total Moffat Collection System Williams Fork Collection System: Steel Pipe Vasquez Tunnel A. P. Gumlick Tunnel Open Canals | 84,899 32,383 26,373 23,807 10,953 178,415 18,939 17,874 15,572 1,795 | 16.1 6.1 5.0 4.5 2.1 33.8 3.6 3.4 3.0 0.3 |
| Moffat Collection System: Concrete and Steel Pipe Moffat Water Tunnel Open Canals Covered Canals Other Tunnels Total Moffat Collection System Williams Fork Collection System: Steel Pipe Vasquez Tunnel A. P. Gumlick Tunnel Open Canals Total Williams Fork Collection System Roberts Tunnel | 84,899 32,383 26,373 23,807 10,953 178,415 18,939 17,874 15,572 1,795 54,180 | 16.1 6.1 5.0 4.5 2.1 33.8 3.6 3.4 3.0 0.3 10.3 |
| Moffat Collection System: Concrete and Steel Pipe Moffat Water Tunnel Open Canals Covered Canals Other Tunnels Total Moffat Collection System Williams Fork Collection System: Steel Pipe Vasquez Tunnel A. P. Gumlick Tunnel Open Canals Total Williams Fork Collection System Roberts Tunnel South Boulder Diversion Conduit: | 84,899 32,383 26,373 23,807 10,953 178,415 18,939 17,874 15,572 1,795 54,180 122,953 | 16.1 6.1 5.0 4.5 2.1 33.8 3.6 3.4 3.0 0.3 10.3 23.3 |
| Moffat Collection System: Concrete and Steel Pipe Moffat Water Tunnel Open Canals Covered Canals Other Tunnels Total Moffat Collection System Williams Fork Collection System: Steel Pipe Vasquez Tunnel A. P. Gumlick Tunnel Open Canals Total Williams Fork Collection System Roberts Tunnel South Boulder Diversion Conduit: Open Canals | 84,899 32,383 26,373 23,807 10,953 178,415 18,939 17,874 15,572 1,795 54,180 122,953 | 16.1 6.1 5.0 4.5 2.1 33.8 3.6 3.4 3.0 0.3 10.3 23.3 |
| Moffat Collection System: Concrete and Steel Pipe Moffat Water Tunnel Open Canals Covered Canals Other Tunnels Total Moffat Collection System Williams Fork Collection System: Steel Pipe Vasquez Tunnel A. P. Gumlick Tunnel Open Canals Total Williams Fork Collection System Roberts Tunnel South Boulder Diversion Conduit: Open Canals Concrete and Steel Pipe | 84,899 32,383 26,373 23,807 10,953 178,415 18,939 17,874 15,572 1,795 54,180 122,953 | 16.1 6.1 5.0 4.5 2.1 33.8 3.6 3.4 3.0 0.3 10.3 23.3 |
| Moffat Collection System: Concrete and Steel Pipe Moffat Water Tunnel Open Canals Covered Canals Other Tunnels Total Moffat Collection System Williams Fork Collection System: Steel Pipe Vasquez Tunnel A. P. Gumlick Tunnel Open Canals Total Williams Fork Collection System Roberts Tunnel South Boulder Diversion Conduit: Open Canals Concrete and Steel Pipe Tunnels | 84,899 32,383 26,373 23,807 10,953 178,415 18,939 17,874 15,572 1,795 54,180 122,953 34,250 10,948 7,704 | 16.1 6.1 5.0 4.5 2.1 33.8 3.6 3.4 3.0 0.3 10.3 23.3 |
| Moffat Collection System: Concrete and Steel Pipe Moffat Water Tunnel Open Canals Covered Canals Other Tunnels Total Moffat Collection System Williams Fork Collection System: Steel Pipe Vasquez Tunnel A. P. Gumlick Tunnel Open Canals Total Williams Fork Collection System Roberts Tunnel South Boulder Diversion Conduit: Open Canals Concrete and Steel Pipe Tunnels Covered Canals | 84,899 32,383 26,373 23,807 10,953 178,415 18,939 17,874 15,572 1,795 54,180 122,953 34,250 10,948 7,704 748 | 16.1 6.1 5.0 4.5 2.1 33.8 3.6 3.4 3.0 0.3 10.3 23.3 6.5 2.1 1.5 0.1 |
| Moffat Collection System: Concrete and Steel Pipe Moffat Water Tunnel Open Canals Covered Canals Other Tunnels Total Moffat Collection System Williams Fork Collection System: Steel Pipe Vasquez Tunnel A. P. Gumlick Tunnel Open Canals Total Williams Fork Collection System Roberts Tunnel South Boulder Diversion Conduit: Open Canals Concrete and Steel Pipe Tunnels | 84,899 32,383 26,373 23,807 10,953 178,415 18,939 17,874 15,572 1,795 54,180 122,953 34,250 10,948 7,704 | 16.1 6.1 5.0 4.5 2.1 33.8 3.6 3.4 3.0 0.3 10.3 23.3 |

SOURCE OF SUPPLY - 1997 (Continued)

Supply Mains and Wells

RAW WATER SUPPLY MAINS

| | | | Capacity | Length | Length |
|------------------|-------------|-----------------------|----------|---------|----------|
| | <u>Size</u> | Kind of Pipe | in MGD | in Feet | in Miles |
| | | | | | |
| Conduit 14: | 48" | Concrete | 32.0 | 3,324 | 0.6 |
| | | | | | |
| Conduit 15: | 60" | Concrete | | 8,040 | 1.5 |
| | 60" | Steel | | 11,158 | 2.1 |
| | 72" | Concrete | | 6,057 | 1.2 |
| | 72" | Steel | | 6,185 | 1.2 |
| Total Conduit 15 | | | 100.0 | 31,440 | 6.0 |
| | | | | | |
| Conduit 16: | 42" | Concrete | | 44,707 | 8.4 |
| | 42" | Steel | | 579 | 0.1 |
| | 48" | Concrete | | 346 | 0.1 |
| Total Conduit 16 | | | 62.0 | 45,632 | 8.6 |
| | | | | | |
| Conduit 20: | 60" | Steel | | 1,038 | 0.2 |
| | 84" | Steel | | 563 | 0.1 |
| | 90" | Concrete | | 59,899 | 11.3 |
| | 96" | Concrete-Lined Tunnel | | 3,012 | 0.6 |
| Total Conduit 20 | | | 222.0 | 64,512 | 12.2 |
| | | | | | |
| Conduit 22: | 30" | Concrete | | 47 | - 1 |
| | 48" | Concrete | | 11 | - 1 |
| | 54" | Concrete | | 44,334 | 8.4 |
| | 54" | Steel | | 510 | 0.1 |
| Total Conduit 22 | | | 137.0 | 44,902 | 8.5 |
| | | | | | |
| Conduit 26: | | | | | |
| | 126" | Steel | | 1,746 | 0.3 |
| | 126" | Concrete | | 147 | - 1 |
| | 126" | Concrete-Lined Tunnel | | 16,089 | 3.0 |
| Total Conduit 26 | | | 750.0 | 17,982 | 3.3 |
| mom::- | | | | | |
| TOTAL RAW W | ATER SU | PPLY MAINS | | 207,792 | 39.2 |

¹Less than 0.1 mile.

INFILTRATION GALLERIES, WELLS

 $\begin{array}{c} & \text{Capacity} \\ & \text{in MGD} \\ \\ \text{Cherry Creek Wells:} \\ & \text{Well O} \\ & 1.2 \\ \\ \text{Farnell Lane Well Field} \\ & - \\ \end{array}$

¹Alternative uses for supplies from the Farnell Lane Well Field are presently under study.

HYDROELECTRIC POWER - 1997

POWER GENERATION, PURCHASE, DISTRIBUTION, AND BANKING

| POWER GENERATION AND PURCHASE | Kilowatt Hours | <u>Value</u> |
|---|----------------|--------------|
| Net Power Generation.1 | | |
| Dillon | 14,130,366 | \$ 509,544 |
| Foothills | 10,262,167 | 487,954 |
| Hillcrest | 7,443,594 | 241,228 |
| Roberts Tunnel | 3,000,277 | 69,852 |
| Strontia Springs | 7,688,616 | 268,764 |
| Williams Fork | 14,043,670 | 452,445 |
| Total Power Generation | 56,568,690 | 2,029,787 |
| Power Purchased for Department of Energy (DOE) power interference | 7,102,830 | 200,719 |
| TOTAL POWER GENERATION AND PURCHASE | 63,671,520 | 2,230,506 |
| POWER DISTRIBUTION | | |
| Power Consumption: ¹ | | |
| Foothills | 5,447,404 | 268,933 |
| Hillcrest | 1,137,953 | 86,462 |
| Total Power Consumption | 6,585,357 | 355,395 |
| | · | |
| Power Sales: | | |
| To Public Service: | | |
| Dillon | 14,130,366 | 509,544 |
| Foothills | 4,814,763 | 219,021 |
| Hillcrest | 6,305,641 | 154,766 |
| Roberts Tunnel | 3,000,277 | 69,852 |
| Strontia Springs | 7,688,616 | 268,764 |
| . • | 35,939,663 | 1,221,947 |
| To Tri-State: | | |
| Williams Fork | 11,920,500 | 376,384 |
| Total Power Sales | 47,860,163 | 1,598,331 |
| | | · |
| Power Deliveries to DOE for Power Interference: | | |
| Williams Fork | 2,123,170 | 76,061 |
| Purchased Power | 7,102,830 | 200,719 |
| Total Power Deliveries to DOE | 9,226,000 | 276,780 |
| TOTAL POWER DISTRIBUTION | 63,671,520 | 2,230,506 |
| DOE BANKED POWER INTERFERENCE ACCOUNT | | |
| Balance, Beginning of Year | 140,828,000 | 4,224,840 |
| Power Deliveries to DOE | 9,226,000 | 276,780 |
| Net Interference | (9,312,000) | (279,360) |
| Balance, End of Year | 140,742,000 | \$ 4,222,260 |
| Datance, Lile Of Teat | 1+0,7+2,000 | Ψ 7,222,200 |

¹Net Power Generation is total generation less station service (except Foothills and Hillcrest) and transmission wheeling losses Value of Williams Fork power and that consumed by Foothills and Hillcrest based on PSC tariff schedule TT, June 4, 1988. ²Value based on 30 mills/kwh (approximate average of PSC and DOE rates).

HYDROELECTRIC POWER - 1997 (Continued)

POWER VALUE, COST, AND RETURN ON INVESTMENT

| | | | | | | | Power Pla | nt | | | | | |
|---------------------------------------|-----|---------------|-----|------------------|----|------------------|-----------------|----------|------------------|-----|-----------------------|----|------------|
| | | <u>Dillon</u> | | <u>Foothills</u> | | <u>Hillcrest</u> | Roberts Tunnel | <u> </u> | Strontia Springs | W | <u> Villiams Fork</u> | | Total |
| Date of Commercial Operation: | О | ct 1, 1987 | N | May 25, 1985 | J | Jun 30, 1993 | Jan 30, 1988 | | Aug 11, 1986 | J | uly 25, 1959 | | |
| VALUE OF POWER GENERATION | 1 | | | | | | | | | | | | |
| Public Service Company Sales | \$ | 509,544 | \$ | 219,021 | \$ | 154,766 | \$ 69,852 | \$ | 268,764 | \$ | - | \$ | 1,221,947 |
| Foothills Consumption | | - | | 268,933 | | - | - | | - | | - | | 268,933 |
| Hillcrest Consumption | | - | | - | | 86,462 | - | | - | | - | | 86,462 |
| Delivered to DOE | | - | | - | | - | - | | - | | 76,061 | | 76,061 |
| Delivered to Tri-State | | - | _ | - | _ | - | | | | _ | 376,384 | _ | 376,384 |
| TOTAL VALUE | _ | 509,544 | _ | 487,954 | | 241,228 | 69,852 | | 268,764 | _ | 452,445 | _ | 2,029,787 |
| COST OF POWER GENERATION | | | | | | | | | | | | | |
| Transmission Wheeling | | - | | - | | - | 8,239 | | - | | - | | 8,239 |
| Operation and Maintenance | | 55,737 | | 93,772 | | 81,243 | 771,980 | | 76,357 | | 88,505 | | 1,167,594 |
| Administrative Expense | | 15,026 | | 32,630 | | 19,845 | 63,241 | | 20,088 | | 21,890 | | 172,720 |
| Depreciation | | 91,033 | _ | 64,176 | _ | 134,383 | 125,222 | _ | 42,984 | _ | 14,776 | _ | 472,574 |
| TOTAL COST | | 161,796 | _ | 190,578 | | 235,471 | 968,682 | | 139,429 | | 125,171 | _ | 1,821,127 |
| Net Return (Loss) | \$_ | 347,748 | \$ | 297,376 | \$ | 5,757 | \$ (898,830) | \$ | 129,335 | \$_ | 327,274 | \$ | 208,660 |
| Plant Investment (Before Depreciation | \$ | 4,375,508 | \$_ | 2,687,611 | \$ | 6,262,033 | \$ 5,883,074 | \$ | 1,704,126 | \$_ | 1,155,166 | \$ | 22,067,518 |
| Return on Investment | _ | 8% | _ | 11% | | 0% | (15)% | | 8% | _ | 28% | _ | 1% |

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WATER SUPPLY, USE, AND STORAGE: 1988 - 1997

Values in acre-feet

| | 1997 | 1996 | 1995 | 1994 | 1993 | 1992 | 1991 | 1990 | 1989 | 1988 |
|--|---------|----------|---------|----------|---------|---------------|-------------|---------|---------|---------|
| SUPPLY | | | | | | | | | | |
| South Platte System: | | | | | | | | | | |
| South Platte Direct Rights | 119,689 | 75,280 | 109,674 | 61,177 | 61,014 | 76,334 | 72,035 | 76,856 | 73,280 | 89,880 |
| South Platte Storage Rights | 68,492 | 36,266 | 55,634 | 42,940 | 36,430 | 39,706 | 37,374 | 38,776 | 33,926 | 67,392 |
| Bear Creek | 47 | 14 | 154 | 569 | 214 | 111 | 656 | 699 | 10,022 | 5,923 |
| Total South Platte System | 188,228 | 111,560 | 165,462 | 104,686 | 97,658 | 116,151 | 110,065 | 116,331 | 117,228 | 163,195 |
| Roberts Tunnel /Blue River System | 92,174 | 89,268 | 98,176 | 90,479 | 135,770 | 89,573 | 83,681 | 76,131 | 85,936 | 58,564 |
| Effluent Exchange ¹ | 6,250 | 19,682 | 12,824 | 29,430 | 20,256 | 15,190 | 16,438 | 11,098 | 11,194 | 9,902 |
| Moffat System: | | | | | | | | | | |
| Fraser Collection System | 44,932 | 47,838 | 18,174 | 37,204 | 32,408 | 44,148 | 56,448 | 56,270 | 51,461 | 66,314 |
| Williams Fork Collection System | 2,692 | 1,508 | 26 | - | 460 | - | 2,974 | 9,348 | 9,574 | 5,286 |
| Cabin-Meadow Creek System | 2,820 | 3,068 | 5,252 | 7,104 | 3,652 | 4,800 | 2,372 | 4,948 | 5,570 | 4,418 |
| South Boulder Creek | 22,142 | 7,892 | 33,421 | 102 | 620 | 2 | 4,094 | 3,090 | 468 | 3,902 |
| Ralston Creek | 5,044 | 214 | 12,398 | 1,372 | 1,328 | 1,034 | 1,670 | 2,184 | | 682 |
| Total Moffat System | 77,630 | 60,520 | 69,271 | 45,782 | 38,468 | 49,984 | 67,558 | 75,840 | 67,073 | 80,602 |
| Total Water Supply | 364,282 | 281,030 | 345,733 | 270,377 | 292,152 | 270,898 | 277,742 | 279,400 | 281,431 | 312,263 |
| USE | | · | | | | | | | | |
| Foothills Filters | 162,841 | 152,057 | 153,757 | 145,954 | 169,908 | 162,224 | 133,946 | 138,781 | 146,456 | 165,649 |
| Marston Filters | 26,874 | 20,750 | 16,877 | 43,216 | 39,215 | 38,175 | 29,728 | 30,633 | 36,561 | 21,090 |
| Moffat Filters | 41,491 | 57,206 | 29,634 | 45,758 | 13,612 | 23,646 | 43,168 | 51,738 | 51,438 | 55,007 |
| Total Water Filtered | 231,206 | 230,013 | 200,268 | 234,928 | 222,735 | 224,045 | 206,842 | 221,152 | 234,455 | 241,746 |
| Change in Clear Water Storage | (2) | 119 | 32 | (107) | (47) | 119 | 113 | (57) | 514 | (167) |
| Total Treated Water Delivered ² | 231,204 | 230,132 | 200,300 | 234,821 | 222,688 | 224,164 | 206,955 | 221,095 | 234,969 | 241,579 |
| Raw Water Deliveries | 30,248 | 30,910 | 26,012 | 34,474 | 40,743 | 22,768 | 28,096 | 25,813 | 23,689 | 25,700 |
| Operating Losses ³ | 57,275 | 20,252 | 64,626 | 21,222 | 19,995 | 24,621 | 21,307 | 17,909 | 13,134 | 10,336 |
| Evaporation Losses ⁴ | 1,878 | 6,154 | 2,207 | 10,961 | 8,236 | 9,952 | 9,075 | 10,068 | 10,474 | 22,040 |
| Total Water Use | 320,605 | 287,448 | 293,145 | 301,478 | 291,662 | 281,505 | 265,433 | 274,885 | 282,266 | 299,655 |
| STORAGE | | | | | | | | | | |
| Total Reservoir Storage, December 31 | 494,510 | 450,837 | 504,591 | 448,117 | 479,218 | 478,728 | 489,335 | 477,026 | 472,511 | 473,346 |
| Total Reservoir Storage, January 1 | 450,837 | 504,591 | 448,117 | 479,218 | 478,728 | 489,335 | 477,026 | 472,511 | 473,346 | 460,738 |
| Storage Gain or (Loss) | 43,673 | (53,754) | 56,474 | (31,101) | 490 | (10,607) | 12,309 | 4,515 | (835) | 12,608 |
| | | | | | | _ | | | | |

¹Initiated exchange programs for Blue River effluent on September 10, 1976.

²Total Treated Water Delivered is determined by adding or subtracting Change in Clear Water Storage from Total Water Filtered.

³Operating losses are computed. They include river carrying charges and losses between supply and distribution system measuring points, but do not include spills or by-passes attributable to the capacity limitations of facilities.

⁴Initiated compensatory storage releases on August 27, 1976, as required for reservoir evaporation losses. Effective April 12, 1989, evaporation losses for Antero, Eleven Mile, and Cheesman Reservoirs are no longer required.

Pumping

1997 Facts

| Water pumped - Current year | 34,179.7 | MG |
|------------------------------------|-------------|-----|
| Water pumped - Last year | 39,578.3 | MG |
| Percentage decrease from last year | (13.6)% | |
| | | |
| Number of pump stations | 17 | |
| Maximum pumping capacity | 1,027.5 | MGD |
| | | |
| Pumping energy costs | \$1,886,000 | |
| Percentage decrease from last year | (24.1)% | |
| | | |

To View Page C-15 Please go to Table of Contents and Click on :

Pumping Map Pumping Stations and Treatment Plants

PUMPING STATION CAPACITIES - 1997

Center of pump U.S.G.S. elevations in parentheses

| | Pump | | | Horse- | Head | Capacity | Meth | od of |
|--------------------------------|--------|-----------------|-----------------------------------|----------------|---------|---------------|--------|--------------------|
| Pump Station/Elevation | Number | Make of Pump | Make of Motor | power | in Feet | in MGD | Oper | ation ¹ |
| BELLEVIEW (5,714) | 4 | Patterson | Ideal Electric | 900 | 260 | 15.0 | M | R |
| 11200W. Belleview Ave. | 5 | Worthington | Westinghouse | 300 | 260 | 5.0 | M | R |
| | 6 | Worthington | General Electric | 600 | 260 | 10.0 | M | R |
| | 7 | Worthington | General Electric | 900 | 260 | 15.0 | M | R |
| | | | | 2,700 | | 45.0 | | |
| BROOMFIELD (5,316) | 1 | Patterson | Ideal Electric | 400 | 350 | 5.0 | M | R |
| 9265 Washington St. | 2 | Patterson | Ideal Electric | 400 | 350 | 5.0 | M | R |
| | 3 | Patterson | Ideal Electric | 400 | 350 | 5.0 | M | R |
| | | | | 1,200 | | 15.0 | | |
| CAPITAL HILL (5,387) | 3 | Wheeler Economy | General Electric | 800 | 175 | 20.0 | M | R |
| 1000 Elizabeth St. | 4 | Byron Jackson | General Electric | 400 | 175 | 12.0 | M | R |
| | 5 | Cameron | General Electric | 700 | 164 | 20.0 | M | R |
| | 6 | Byron Jackson | Westinghouse | 600 | 175 | 17.0 | M | R |
| | 7 | Byron Jackson | Westinghouse | 800 | 175 | 23.0 | M | R |
| | | | | 3,300 | | 92.0 | | |
| CHATFIELD (5,740) | 1 | Peerles | Westinghouse | 125 | 320 | 1.6 | M | R |
| 8371 Continental Divide Rd. | 2 | Peerles | Westinghouse | 125 | 320 | 1.6 | M | R |
| | 3 | Peerles | Lincoln Lineguard | 125 | 320 | 1.6 | M | R |
| | 4 | Peerles | Lincoln Lineguard | 125 | 320 | 1.6 | M | R |
| | 5 | Peerles | Lincoln Lineguard | 125 | 320 | 1.6 | M | R |
| | | | | 625 | | 8.0 | | |
| | | | | | | | | |
| CHERRY HILLS (5,380) | 1 | Worthington | General Electric | 1,000 | 220 | 20.0 | M | R |
| 1590 Radcliff Ave. | 2 | Worthington | General Electric | 1,000 | 220 | 20.0 | M | R |
| | 3 | Worthington | General Electric | 1,000 | 220 | 20.0 | M | R |
| | 4 | Worthington | General Electric | 1,000 | 220 | 20.0 | M | R |
| | 5 | Worthington | General Electric General Electric | 1,000 | 220 | 20.0 | M M | R R |
| | 6 | Worthington | General Electric | 1,000 6,000 | 220 | 20.0 120.0 | IVI | K |
| | | | | | | | | |
| CLARKSON STREET (5,482 | 1 | Fairbanks Morse | Fairbanks Morse | 150 | 234 | 2.1 | M | R |
| 5300 S. Clarkson St. | 2 | Fairbanks Morse | Fairbanks Morse | 150 | 234 | 2.1 | M | R |
| | 3 | Fairbanks Morse | Fairbanks Morse | 150 | 234 | 2.1 | M | R |
| | 4 | Fairbanks Morse | Fairbanks Morse | 150 | 234 | 2.1 | M | R |
| | 5 | Fairbanks Morse | Fairbanks Morse | 150 | 234 | 2.1 | M | R |
| | 6 | Fairbanks Morse | Fairbanks Morse | 150 | 234 | 2.1 | M | R |
| | | | | 900 | | 12.6 | | |
| EINFELDT (5,341) | 2 | Wheeler Economy | General Electric | 800 | 175 | 20.0 | M | R |
| 1900 S. University Blvd. | 3 | Byron Jackson | General Electric | 600 | 175 | 17.0 | M | R |
| | 4 | Byron Jackson | General Electric | 400 | 175 | 12.0 | M | R |
| | 5 | Byron Jackson | Westinghouse | 200 | 175 | 5.3 | M | R |
| | 6 | Worthington | Electric Machinery | 800 | 175 | 20.0 | M | R |
| | 7 | Wheeler Economy | General Electric | 800 | 175 | 20.0 | M | R |
| ¹ M-Manual P-Pemote | | | | 3,600 | | 94.3 | | |

¹M=Manual, R=Remote

(Continued next page)

²Vault Type Structure (underground)

PUMPING STATION CAPACITIES - 1997 (Continued)

Center of pump U.S.G.S. elevations in parentheses

| | Pump | | | Horse- | Head | Capacity | Meth | od of |
|----------------------------|--------|-----------------|--------------------|--------|---------|----------|------|--------------------|
| Pump Station/Elevation | Number | Make of Pump | Make of Motor | power | in Feet | in MGD | Oper | ation ¹ |
| FIFTY-SIXTH AVENUE (5,203) | 2 | Allis Chalmers | Ideal Electric | 1,750 | 450 | 15.0 | M | R |
| 7355 56th Ave. | 3 | Allis Chalmers | Ideal Electric | 1,750 | 450 | 15.0 | M | R |
| | 4 | Allis Chalmers | Ideal Electric | 1,750 | 450 | 15.0 | M | R |
| | 5 | Allis Chalmers | Ideal Electric | 1,750 | 450 | 15.0 | M | R |
| | 8 | Gould | U.S. Motor | 500 | 75 | 30.0 | M | R |
| | 9 | Gould | U.S. Motor | 500 | 75 | 30.0 | M | R |
| | | | | 8,000 | | 120.0 | | |
| GREEN MOUNTAIN (5,837) | 1 | Patterson | General Electric | 700 | 260 | 10.0 | M | R |
| 12400 W. Jewell Ave. | 2 | Patterson | General Electric | 350 | 260 | 5.0 | M | R |
| | 3 | Patterson | General Electric | 350 | 260 | 5.0 | M | R |
| | 4 | Patterson | General Electric | 700 | 260 | 10.0 | M | R |
| | | | | 2,100 | | 30.0 | | |
| HIGHLANDS (5,704) | 1 | Fairbanks Morse | General Electric | 125 | 165 | 3.0 | M | R |
| (Low Pressure) | 2 | Fairbanks Morse | General Electric | 125 | 165 | 3.0 | M | R |
| 8100 S. University Blvd. | 3 | Fairbanks Morse | General Electric | 125 | 165 | 3.0 | M | R |
| | 4 | Fairbanks Morse | General Electric | 125 | 165 | 3.0 | M | R |
| | 5 | DeLaval | Ideal Electric | 350 | 165 | 10.0 | M | R |
| | 6 | DeLaval | Ideal Electric | 350 | 165 | 10.0 | M | R |
| | 7 | DeLaval | Ideal Electric | 350 | 165 | 10.0 | M | R |
| | | | | 1,550 | | 42.0 | | |
| HIGHLANDS (5,704) | 1 | Gould | General Electric | 900 | 260 | 15.0 | M | R |
| (High Pressure) | 4 | Gould | General Electric | 900 | 260 | 15.0 | M | R |
| 8100 S. University Blvd. | 6 | Gould | General Electric | 300 | 110 | 10.0 | M | R |
| | 7 | Gould | General Electric | 300 | 110 | 10.0 | M | R |
| | 8 | Gould | General Electric | 150 | 110 | 5.0 | M | R |
| | 9 | Gould | General Electric | 150 | 110 | 5.0 | M | R |
| | | | | 2,700 | | 60.0 | | |
| HILLCREST (5,602) | 1 | Allis Chalmers | Allis Chalmers | 50 | 169 | 1.0 | M | R |
| (Low Pressure) | 2 | Allis Chalmers | Allis Chalmers | 100 | 167 | 2.0 | M | R |
| 4200 S. Happy Canyon Rd. | 3 | DeLaval | Electric Machinery | 200 | 163 | 5.0 | M | R |
| | 4 | DeLaval | Electric Machinery | 400 | 163 | 11.0 | M | R |
| | 5 | DeLaval | Electric Machinery | 400 | 163 | 11.0 | M | R |
| | 6 | Worthington | Fairbanks Morse | 400 | 163 | 11.0 | M | R |
| | 7 | Worthington | Fairbanks Morse | 400 | 163 | 11.0 | M | R |
| | | | | 1,950 | | 52.0 | | |
| HILLCREST (5,602) | 8 | American Marsh | Westinghouse | 75 | 320 | 0.8 | M | R |
| (High Pressure) | 9 | DeLaval | Electric Machinery | 200 | 318 | 2.5 | M | R |
| 4200 S. Happy Canyon Rd. | 10 | DeLaval | Electric Machinery | 350 | 313 | 4.8 | M | R |
| | 11 | DeLaval | Electric Machinery | 800 | 315 | 10.5 | M | R |
| | 12 | DeLaval | Electric Machinery | 800 | 315 | 10.5 | M | R |
| | 13 | Patterson | Ideal Electric | 900 | 320 | 10.0 | M | R |
| | | | | 3,125 | | 39.1 | | |
| KENDRICK (5,607) | 1 | Patterson | Ideal Electric | 300 | 120 | 10.0 | M | R |
| (Low Pressure) | 2 | DeLaval | General Electric | 300 | 117 | 10.0 | M | R |
| 9380 W. Jewell Ave. | 3 | Worthington | General Electric | 75 | 119 | 2.9 | M | R |
| | 4 | Worthington | General Electric | 75 | 119 | 2.9 | M | R |
| | 5 | Worthington | General Electric | 75 | 119 | 2.9 | M | R |
| | | | | 825 | | 28.7 | | |

¹M=Manual, R=Remote (Continued next page)

PUMPING STATION CAPACITIES - 1997 (Continued)

Center of pump U.S.G.S. elevations in parentheses

| | Pump | | | Horse- | Head | Capacity | Meth | od of |
|--|--------|-----------------|-----------------------|--------|---------|----------|------|--------------------|
| Pump Station/Elevation | Number | Make of Pump | Make of Motor | power | in Feet | in MGD | Oper | ation ¹ |
| KENDRICK (5,607) | 7 | Worthington | Electric Machinery | 800 | 260 | 10.0 | M | R |
| (High Pressure) | 8 | Worthington | Electric Machinery | 800 | 260 | 10.0 | M | R |
| 9380 W. Jewell Ave. | 9 | Patterson | Waukesha ³ | 700 | 260 | 10.0 | M | R |
| | 10 | DeLaval | Waukesha ³ | 400 | 260 | 5.0 | M | |
| | 11 | Patterson | Ideal Electric | 700 | 260 | 10.0 | M | R |
| | | | | 3,400 | | 45.0 | | |
| LAKERIDGE (5,516) | 1 | American | United States | 50 | 120 | 1.7 | M | R |
| 2700 S. Raleigh St. | 2 | Pacific | Ideal Electric | 75 | 120 | 2.9 | M | R |
| | 3 | Pacific | Ideal Electric | 75 | 120 | 2.9 | M | R |
| | 4 | Allis Chalmers | Allis Chalmers | 50 | 120 | 2.0 | M | R |
| | | | | 250 | | 9.5 | | |
| LAMAR (5,443) ² | 1 | Worthington | Marathon Electric | 100 | 120 | 2.9 | M | R |
| 6301 W. Yale Ave. | 2 | Worthington | Marathon Electric | 100 | 120 | 2.9 | M | R |
| | 3 | Worthington | Fairbanks Morse | 75 | 120 | 2.0 | M | R |
| | | | | 275 | | 7.8 | | |
| LONE TREE (5,904) | 3 | Gould | Siemens & Allis | 300 | 127 | 10.0 | M | R |
| (Low Pressure) | 4 | Gould | Siemens & Allis | 150 | 127 | 5.0 | M | R |
| 7700 E. Chapparel Rd. | 5 | Gould | Siemens & Allis | 150 | 127 | 5.0 | M | R |
| | | | | 600 | | 20.0 | | |
| | | | | | | | | _ |
| LONE TREE (5,904) | 6 | Gould | Siemens & Allis | 300 | 227 | 5.0 | M | R |
| (High Pressure) | 7 | Gould | Siemens & Allis | 600 | 227 | 10.0 | M | R |
| 7700 E. Chapparel Rd. | 8 | Gould | Siemens & Allis | 1.500 | 227 | 10.0 | M | R |
| | | | | 1,500 | | 25.0 | | |
| MARSTON (5,485) | 1 | Worthington | Waukesha ³ | 700 | 166 | 20.0 | M | R |
| (Low Pressure) | 2 | Worthington | General Electric | 700 | 166 | 20.0 | M | R |
| 5700 W. Quincy Ave. | 3 | Worthington | General Electric | 700 | 166 | 20.0 | M | R |
| | 4 | Worthington | General Electric | 700 | 166 | 20.0 | M | R |
| | 5 | Worthington | General Electric | 700 | 166 | 20.0 | M | R |
| | | | | 3,500 | | 100.0 | | |
| MARSTON (5,485) (High Pressure) | | | | | | | | |
| 5700 W. Quincy Ave. | 8 | Patterson | Waukesha ³ | 400 | 260 | 6.5 | M | R |
| · | 10 | Patterson | Ideal Electric | 900 | 260 | 15.0 | M | R |
| | 11 | Patterson | Ideal Electric | 900 | 260 | 15.0 | M | R |
| | | | | 2,200 | | 36.5 | | |
| SIXTY-FOURTH AVENUE (5, | 42 3 | Fairbanks Morse | United States | 100 | 90 | 5.0 | M | R |
| (Low Pressure) | 6 | Fairbanks Morse | United States | 200 | 90 | 10.0 | M | R |
| 21850 E. 64th Ave. | | | | 300 | | 15.0 | | |
| SIXTY-FOURTH AVENUE (5, (High Pressure) 21850 E. 64th Ave. | 42 1 | Fairbanks Morse | United States | 400 | 170 | 10.0 | M | R |
| 21030 E. 04til AVC. | | | Grand Total | 51,000 | | 1,027.5 | | |
| | | | | | | | | |

Note: City Datum = 5,172.91

¹M=Manual, R=Remote

²Vault Type Structure (underground)

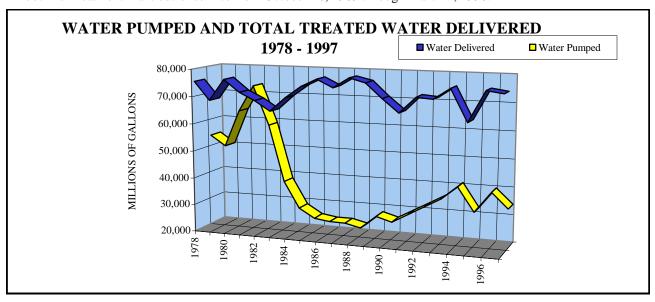
³Natural Gas Engine

WATER PUMPED AND POWER COSTS: 1978 - 1997

| | | Total Treated | | Pumps | | | Total Power, |
|------|-----------------|-----------------|--------|-----------------|----------------------|----------------|--------------------------|
| | Water Pumped | Water Delivered | | Capacity | Total Pumping | | Electric and |
| Year | (million gals.) | (million gals.) | Number | (million gals.) | Power Used (kwh) | Gas Used (dth) | Gas Costs ¹ |
| 1978 | 53,897.87 | 75,450.61 | 150 | 1,100.6 | 53,242,739 | - | \$1,423,019 |
| 1979 | 50,192.25 | 68,768.66 | 147 | 1,098.2 | 50,389,204 | - | \$1,742,657 |
| 1980 | 63,677.45 | 76,577.86 | 146 | 1,116.4 | 60,509,639 | - | \$2,583,666 |
| 1981 | 73,261.58 | 72,135.96 | 144 | 1,110.6 | 67,662,243 | - | \$3,287,932 |
| 1982 | 58,834.39 | 69,415.05 | 139 | 1,100.1 | 60,232,436 | - | \$3,391,148 |
| | | | | | | | |
| 1983 | 38,010.33 | 65,815.78 | 131 | 1,109.4 | 41,763,645 | - | \$2,204,291 |
| 1984 | 28,378.59 | 70,930.52 | 121 | 1,088.1 | 36,468,802 | - | \$2,316,083 |
| 1985 | 25,000.29 | 75,100.00 | 128 | 1,182.2 | 34,963,885 | - | \$2,114,549 |
| 1986 | 24,237.58 | 77,887.63 | 129 | 1,203.6 | 27,464,812 | - | \$1,895,623 |
| 1987 | 24,158.20 | 75,162.49 | 127 | 1,201.8 | 28,220,134 | - | \$1,818,839 |
| | | | | | | | |
| 1988 | 22,870.50 | 78,718.55 | 118 | 1,156.8 | 23,762,950 | - | \$1,572,461 |
| 1989 | 27,724.95 | 77,262.29 | 118 | 1,156.8 | 27,181,894 | - | \$1,859,268 |
| 1990 | 26,089.81 | 72,043.94 | 113 | 1,091.8 | 27,734,829 | - | \$1,814,124 |
| 1991 | 29,349.37 | 67,435.91 | 113 | 1,091.8 | 27,167,261 | - | \$1,778,200 ² |
| 1992 | 32,613.51 | 73,043.27 | 113 | 1,091.8 | 29,349,535 | - | \$1,782,578 ² |
| | | | | | | | |
| 1993 | 35,826.13 | 72,562.61 | 113 | 1,091.8 | 31,537,298 | - | \$1,800,790 |
| 1994 | 40,720.24 | 76,516.08 | 116 | 1,116.8 | 36,619,984 | - | \$1,949,520 |
| 1995 | 32,115.03 | 65,267.91 | 116 | 1,116.8 | 30,722,542 | - | \$1,783,567 |
| 1996 | 39,578.30 | 76,203.96 | 105 | 1,027.5 | 40,222,555 | - | \$2,638,872 |
| 1997 | 34,179.67 | 75,363.33 | 105 | 1,027.5 | 31,876,334 | 23,055 | \$1,997,924 |

¹Total energy costs for all Denver metropolitan area Board water distribution facilities.

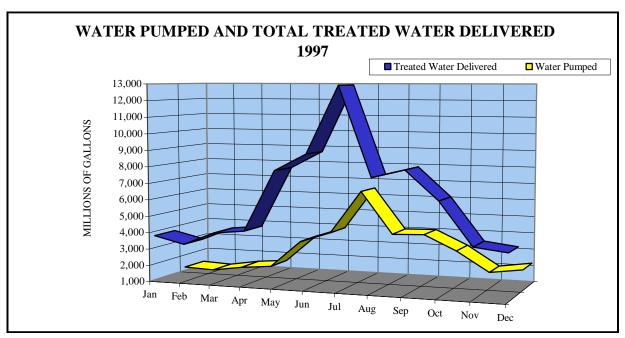
²Foothills Treatment Plant out of service from October 16, 1989 through March 2, 1990.



WATER PUMPED MONTHLY - 1997

(millions of gallons)

| | | Total Treated | | | Total Treated |
|----------|--------------|-----------------|------------|--------------|-----------------|
| | Water Pumped | Water Delivered | | Water Pumped | Water Delivered |
| January | 1,215.76 | 3,744.61 | August | 3,958.14 | 7,702.68 |
| February | 1,124.54 | 3,296.22 | September | 4,017.69 | 8,189.84 |
| March | 1,403.51 | 4,067.53 | October | 3,125.67 | 6,489.00 |
| April | 1,570.61 | 4,281.04 | November | 1,952.46 | 3,981.86 |
| May | 3,228.20 | 7,939.16 | December | 2,222.61 | 3,751.71 |
| June | 3,879.51 | 8,965.76 | | | |
| July | 6,480.97 | 12,953.92 | Total Year | 34,179.67 | 75,363.33 |



WATER PUMPED BY STATION - 1997

(millions of gallons)

| Belleview | 3,759.56 | Hillcrest (High) | 909.70 |
|--------------------|----------|--------------------------|-----------|
| Broomfield | 831.08 | Kendrick (Low) | 738.98 |
| Capital Hill | 1.60 | Kendrick (High) | 3,424.34 |
| Chatfield | 777.69 | Lakeridge | 707.78 |
| Cherry Hills | 299.58 | Lamar | 648.68 |
| Clarkson Street | 514.26 | Lone Tree | 1,429.39 |
| Einfeldt | 450.89 | Marston (Low) | 5,340.87 |
| Fifty-Sixth Avenue | 717.58 | Marston (High) | 1,103.99 |
| Green Mountain | 1,902.36 | Sixty-Fourth Ave. (High) | 253.63 |
| Highlands (Low) | 1,816.59 | Sixty-Fourth Ave. (Low) | 17.49 |
| Highlands (High) | 8,428.20 | | |
| Hillcrest (Low) | 105.44 | Total | 34,179.67 |
| | | · | |

DISTRIBUTING RESERVOIRS AND RAW WATER PUMPING STATIONS - 1997

High water U.S.G.S. elevation in parentheses

| | Capacity (million gals.) | | Capacity (million gals.) |
|--------------------------------------|--------------------------|-------------------------------------|--------------------------|
| Alameda & Beech (6,042):1 | (mmon gais.) | Hogback (6,007) | 3.95 |
| Number 1 | 1.0 | Hogoack (6,007) | 3.93 |
| Number 2 | 2.0 | KenCaryl Ranch $(6,410)^1$ | |
| Number 2 | 3.0 | Number 3 | 2.0 |
| | 3.0 | Number 4 | 2.0 |
| Ashland (5,430): | | Tumber 4 | 4.0 |
| East Basin | 19.1 | | |
| West Basin | 21.9 | Kendrick (5,627) | 15.0 |
| | 41.0 | | |
| | | Lakehurst Tank (5,708) ¹ | 4.0 |
| Belleview (5,743) | 10.0 | | |
| | | Lone Tree (5,930) | 10.0 |
| Broomfield (5,335) | | | <u> </u> |
| Number 1 | 2.5 | Marston Treatment (5,503): | |
| Number 2 | 2.5 | Number 1 | 3.5 |
| | 5.0 | Number 2 | 3.5 |
| | | Number 3 | 10.4 |
| Broomfield Tank (5,491) ¹ | 3.0 | Number 4 | 14.0 |
| | | | 31.4 |
| Capital Hill (5,395): | | | |
| Number 1 | 23.4 | Moffat Treatment (5,624): | |
| Number 2 | 29.8 | Number 1 | 5.1 |
| Number 3 | 27.0 | Number 2 | 5.1 |
| | 80.2 | Number 3 | 6.0 |
| | | Number 4 | 13.1 |
| Chatfield Tank (5,740) | 5.0 | | 29.3 |
| Fifty-Sixth Avenue (5,223) | 15.0 | Sixty-Fourth Avenue (5,460) | 15.0 |
| Foothills (5,860): | | Southgate $(6,123)^{l}$ | |
| Number 1 | 25.0 | Number 1 | 2.0 |
| Number 2 | 25.0 | Number 2 | 6.0 |
| | 50.0 | | 8.0 |
| Green Mountain (5,859) | 5.0 | Utah Tank (6,042) ¹ | 3.0 |
| Green Wountain (0,003) | | 2 (3,4) | |
| Highlands (5,722): | | Valley Tank (6,000) ¹ | 2.0 |
| Number 1 | 3.3 | • | |
| Number 2 | 3.2 | Willows Tank (5,868) ¹ | |
| Number 3 | 13.5 | Number 1 | 2.8 |
| | 20.0 | Number 2 | 5.2 |
| | | | 8.0 |
| Hillcrest (5,624): | | | |
| Number 1 | 14.8 | Total Capacity | 400.5 |
| Number 2 | 14.8 | | |
| | 29.6 | | |
| | | | |

¹Not Owned by Denver Water.

RAW WATER PUMPING STATIONS

| Pump Station 1 Last Chance | Pump Number 1 | Make of Pump Worthington | Make of Motor General Electric | Horse- Power 30 | Head in Feet 60 | Capacity in MGD 2.2 |
|----------------------------|---------------------|----------------------------------|---|--------------------------|-----------------------|------------------------------|
| Metro Sewer | 1 2 3 | Peerless Peerless Peerless | United States General Electric General Electric | 200 200 200 600 | 30 30 30 | 30.0 30.0 30.0 90.0 |
| | | | Total | 630 | | 92.2 |

Treatment and Water Quality

1997 Facts

| Treated water delivered | | MG MG |
|---|----------|----------|
| Average day treated water use rate | . 206.47 | MGD |
| Maximum day treated water use rate: (July 16) | 517.57 | MGD |
| Maximum hour treated water use rate: (July 14, at 10:00 p.m.) | .712.48 | MGD |
| Water Quality: Total samples collected Microbiological analyses completed Chemical analyses completed | 9,789 | |

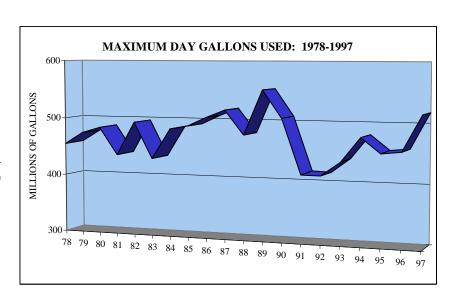
CONSUMPTION OF TREATED WATER: 1978 - 1997

| | | (million gallons) | | Population | Avg. Daily Gals. | Precipitation in Inches ² | | |
|-------------------|-----------|------------------------|------------|---------------------|---------------------|--------------------------------------|-------|-------------|
| Year | Acre-Feet | Annual | Daily Avg. | Daily Max. | July 1 ¹ | Per Capita | Year | 4/1 to 9/30 |
| 1978^{3} | 231,549 | 75,450.61 | 206.71 | 454.47 | 830,000 | 249 | 13.25 | 8.69 |
| 1979^{3} | 211,045 | 68,768.66 ⁴ | 188.41 | 474.46^4 | 838,000 | 224^{4} | 21.88 | 14.68 |
| 1980^{3} | 235,010 | 76,577.86 ⁴ | 209.23 | 484.68 ⁴ | 846,000 | 244 ⁴ | 14.13 | 10.51 |
| 1981 ³ | 221,378 | $72,135.96^4$ | 197.63 | 438.05^4 | 856,000 | 227^{4} | 14.03 | 8.65 |
| 1982 | 213,026 | 69,415.05 ⁴ | 190.18 | 494.56 ⁴ | 856,000 | 219 ⁴ | 17.90 | 13.03 |
| 1983 | 201,981 | 65,815.78 | 180.32 | 433.29 | 863,000 | 209 | 23.12 | 14.46 |
| 1984 | 217,679 | 70,930.52 | 193.80 | 485.04 | $862,000^5$ | 225 | 19.76 | 11.40 |
| 1985 | 233,141 | 75,100.00 | 208.13 | 490.84 | 870,000 | 239 | 17.05 | 12.12 |
| 1986 | 239,029 | 77,887.63 | 213.39 | 505.80 | 875,000 | 244 | 14.97 | 9.31 |
| 1987 | 230,666 | 75,162.49 | 205.92 | 518.55 | 879,000 | 234 | 20.16 | 12.16 |
| 1988 | 241,579 | 78,718.55 | 215.67 | 477.65 | 879,000 | 245 | 15.94 | 12.19 |
| 1989 | 237,109 | 77,262.29 | 211.67 | 553.29 | 887,000 | 239 | 14.90 | 11.11 |
| 1990 | 221,095 | 72,043.94 | 197.38 | 507.12 | 891,000 | 222 | 16.57 | 9.79 |
| 1991 | 206,953 | 67,435.91 | 184.76 | 414.79 | 908,000 | 203 | 19.02 | 13.91 |
| 1992 | 224,162 | 73,043.27 | 199.57 | 414.11 | 912,000 | 219 | 16.54 | 8.58 |
| 1993 | 222,686 | 72,562.61 | 198.80 | 438.20 | 928,000 | 214 | 15.74 | 9.69 |
| 1994 | 234,819 | 76,516.08 | 209.63 | 479.01 | 947,000 | 221 | 13.50 | 8.17 |
| 1995 | 200,300 | 65,267.91 | 178.82 | 453.55 | 952,000 | 188 | 21.10 | 17.92 |
| 1996 | 233,861 | 76,203.96 | 208.21 | 456.99 | $945,000^6$ | 220 | 14.81 | 11.15 |
| 1997 | 231,282 | 75,363.33 | 206.47 | 517.57 | 957,000 | 216 | 19.73 | 14.20 |

¹Population estimates are treated water customers only. Revised data from 1981 to 1990 are interpolated from analysis of the 1990 census.

TREATMENT PLANT CAPACITY

| | | Capacity |
|--------------|-------------|----------|
| <u>Plant</u> | <u>Type</u> | in MGD |
| Foothills | Dual-Media | 250.0 |
| Marston | Dual-Media | 200.0 |
| Moffat | Rapid Sand | 195.0 |
| | | 645.0 |



²Precipitation readings are the averages of Stapleton, Lakewood, Cherry Creek Dam, and Kassler measurement stations

³Water restrictions in effect from June 1 to September 30, 1977 - 1980, and May 1 to September 30, 1981

⁴Annual consumption includes 406.05 mg sold to the City of Aurora during 1979, 1,007.21 mg sold during 1980, 1,084.10 mg sold during 1981, and 1,082.93 mg sold during 1982, when Aurora's raw water conduit was out of service due to Denver's Foothills Project construction. These amounts were subtracted from the listed annual consumptic totals in computing the average daily gallons per capita figures.

⁵Population decrease due to loss of Sable District from the system

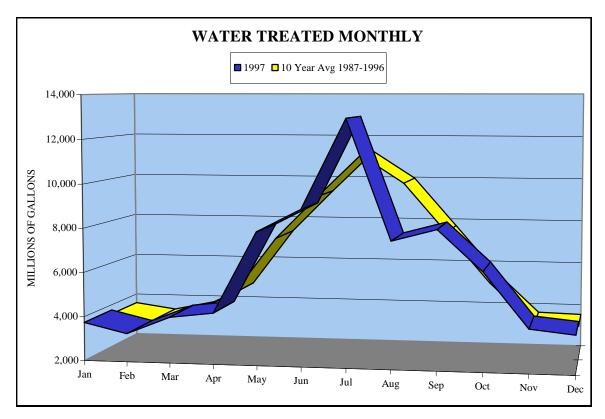
⁶Population decrease due to excluding the City of Broomfield's population beginning 1996

WATER TREATED MONTHLY - 1997

(millions of gallons)

| | Foothills | Marston | Moffat | |
|-----------|-----------|-------------|-----------|-----------|
| | Filters | Filters | Filters | Total |
| January | 3,256.37 | | 485.43 | 3,741.80 |
| February | 2,953.70 | - | 331.61 | 3,285.31 |
| March | 3,654.03 | - | 422.65 | 4,076.68 |
| April | 3,547.21 | - | 755.94 | 4,303.15 |
| May | 5,630.76 | 527.35 | 1,820.80 | 7,978.91 |
| June | 5,766.60 | 1,288.45 | 1,939.82 | 8,994.87 |
| July | 7,445.09 | 2,189.70 | 3,350.88 | 12,985.67 |
| August | 4,472.98 | 1,028.50 | 2,161.69 | 7,663.17 |
| September | 4,967.90 | 1,400.46 | 1,825.54 | 8,193.90 |
| October | 5,526.15 | 869.97 | - | 6,396.12 |
| November | 3,324.01 | 637.30 | - | 3,961.31 |
| December | 2,515.28 | 814.97 | 425.08 | 3,755.33 |
| Total | 53,060.08 | 8,756.70 | 13,519.44 | 75,336.22 |

Note: Totals are based on multiple totalizer meter readings at various treatment plant sites. The accuracy of the readings varies within the limits inherent to each water meter.



Total Water Treated for the Year Plus Decrease in Clear Water Storage Total Treated Water Delivered for the Year 75,336.22 MG 27.11 MG 75,363.33 MG

CHEMICAL TREATMENT AND ANALYSIS: TREATED WATER IN DISTRIBUTION SYSTEM - 1997

CHEMICAL TREATMENT - 1997

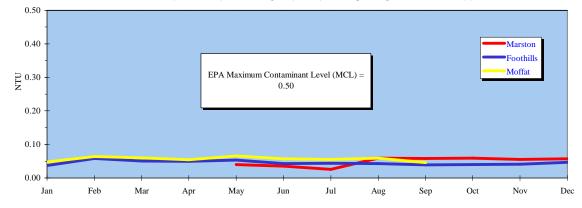
| | Pounds of Chemicals Used | | | | |
|-----------------------------------|--------------------------|-----------|-----------|------------|-------------|
| | Foothills | Marston | Moffat | Total | Total Cost |
| Aluminum Sulfate (Liquid Alum) | 19,645,545 | 3,683,005 | 9,045,711 | 32,374,261 | \$1,196,517 |
| Ammonium Hydroxide (Aqua Ammonia) | 594,391 | 114,210 | 155,102 | 863,703 | 57,259 |
| Powdered Activated Carbon | - | - | - | - | - |
| Calcium Oxide (Lime - Bulk) | 77,503 | - | - | 77,503 | 3,525 |
| Calcium Hydroxide (Lime -Bulk) | - | - | 1,293,690 | 1,293,690 | 93,477 |
| Chlorine, Liquid | 1,204,713 | 226,462 | 324,294 | 1,755,469 | 327,345 |
| Caustic Soda | 5,875,500 | 1,052,731 | 1,156,625 | 8,084,856 | 387,477 |
| Polymer (Anionic) | - | - | - | - | - |
| Polymer (Cationic) | 909,592 | 113,057 | - | 1,022,649 | 481,344 |
| Polymer (Nonionic) | 48,645 | 3,325 | 30,103 | 82,073 | 126,496 |
| Potassium Permanganate | 441 | - | - | - | 437 |
| Soda Ash | - | - | 199,240 | 199,240 | 11,866 |
| Sodium Silicofluoride | 282,715 | 42,300 | 131,978 | 456,993 | 117,136 |
| Total Cost | | | | | \$2,802,878 |

DISTRIBUTION SYSTEM & TREATMENT PLANT EFFLUENT TOTAL COLIFORM RESULTS - 1997

| | Number of | Number of | |
|-----------|-----------|-----------|------------|
| Month | Samples | Positives | % Positive |
| January | 470 | 0 | 0.00% |
| February | 427 | 1 | 0.23% |
| March | 513 | 0 | 0.00% |
| April | 495 | 0 | 0.00% |
| May | 473 | 1 | 0.21% |
| June | 548 | 2 | 0.36% |
| July | 651 | 7 | 1.08% |
| August | 508 | 1 | 0.20% |
| September | 550 | 3 | 0.55% |
| October | 584 | 0 | 0.00% |
| November | 501 | 0 | 0.00% |
| December | 599 | 1 | 0.17% |
| | 6,319 | 16 | 0.25% |

The total coliform group of bacteria is a microbiological indicator used to determine the safety of drinking water for human consumption. The EPA and the Colorado Department of Public Health and Environment require that Denver Water test a minimum of 300 treated water samples each month for total coliforms. The Maximum Contaminant Level (MCL) for total coliform specifies that no more than 5% of the samples taken each month may be positive. All positive samples were further analyzed to determine if *E. coli* bacteria were present, which would indicate possible contamination from a fecal source. There was one positive *E. coli* sample in 1997 and the repeat sample was negative.

TREATMENT PLANT EFFLUENT AVERAGE TURBIDITY - 1997



 $Turbidity is a measure of the clarity of the water. \ EPA has established 0.50 \ NTU as the MCL for turbidity.$

TREATED WATER QUALITY SUMMARY: TREATMENT PLANT EFFLUENT AVERAGES - 1997

| | Maximum | | | |
|--|----------------------------|---------|-----------|---------|
| Analysis | Contaminant Level (MCL) | Marston | Foothills | Moffat |
| General (mg/L) | | | | |
| Alkalinity, Total as CaCO ₃ | | 65 | 66 | 26 |
| Chlorine, Total | | 1.35 | 1.43 | 1.33 |
| Color (PCU) | | 6 | 4 | 2 |
| Hardness as CaCO ₃ | | 99 | 102 | 50 |
| Monochloramine | | 1.12 | 1.26 | 1.28 |
| PH (SU) | | 7.8 | 7.7 | 7.4 |
| Specific Conductance (µS) | | 292 | 278 | 128 |
| Temperature (°C) | | 15 | 10 | 13 |
| Total Dissolved Solids | | 179 | 174 | 87 |
| Turbidity (NTU) | 0.50 | 0.05 | 0.05 | 0.06 |
| Metals (mg/L) | | | | |
| Aluminum, Total | | 0.05 | 0.03 | 0.01 |
| Barium, Total | 2 | 0.04 | 0.04 | 0.02 |
| Calcium | | 26 | 25 | 14 |
| Copper, Total | TT^1 | 0.01 | 0.02 | 0.06 |
| Iron, Total | | 0.05 | 0.03 | 0.02 |
| Lithium | | 0.005 | 0.006 | < 0.005 |
| Magnesium | | 8.0 | 8.0 | 2.3 |
| Manganese, Total | | 0.016 | 0.007 | 0.002 |
| Molybdenum, Total | | 0.010 | 0.009 | 0.007 |
| Potassium | | 1.8 | 1.7 | 0.8 |
| Sodium | | 22 | 21 | 8 |
| Strontium | | 0.2 | 0.2 | < 0.1 |
| Zinc, Total | | 0.005 | 0.002 | 0.009 |
| Ions (mg/L) | | | | |
| Chloride | | 24.7 | 24.1 | 3.7 |
| Fluoride | 4.0 | 0.90 | 0.90 | 0.83 |
| Nitrate-Nitrogen | 10 | 0.05 | 0.06 | 0.10 |
| Phosphorus, Total | | 0.018 | 0.014 | 0.015 |
| Silicon Dioxide | | 4.5 | 4.1 | 7.0 |
| Sulfate | | 47.9 | 45.7 | 30.2 |

(Continued next page)

¹ TT indicates that the MCL involves treatment techniques.
² DS indicates that the MCL involves calculations based upon the entire distribution system.

TREATED WATER QUALITY SUMMARY: TREATMENT PLANT EFFLUENT AVERAGES - 1997 (Continued)

| | Maximum Contaminant | | | |
|--------------------------------------|------------------------|----------------|------------------|--------|
| Analysis | Level (MCL) | Marston | Foothills | Moffat |
| Radiological (pCi/L) | | | | |
| Beta, Total | 5 | 3 | 2 | <2 |
| Radium-228 | | <1 | <1 | 1 |
| Uranium (mg/L) | | 0.0010 | 0.0011 | 0.0008 |
| Microbiological | | | | |
| m-Heterotrophic Plate Count (CFU/mL) | | 6 | 1 | - |
| Plankton (Count/mL) | | 1 | 1 | 6 |
| Disinfection By-Products (µg/L) | | | | |
| 1,1,1-Trichloropropanone | | 2.1 | 1.6 | 1.7 |
| 1,1-Dichloropropanone | | 0.6 | 0.7 | 0.7 |
| Bromochloroacetic acid | | 2.5 | 2.9 | 1.2 |
| Bromochloroacetonitrile | | 0.7 | 0.3 | < 0.2 |
| Bromodichloroacetic acid | | 4 | 3 | <1 |
| Bromodichloromethane | | 10.2 | 6.3 | 2.3 |
| Chloral hydrate | | 3.4 | 2.3 | 2.6 |
| Chloroform | | 25.2 | 22.4 | 29.1 |
| Cyanogen chloride | | 1.1 | 2.5 | 1.8 |
| Dibromochloromethane | | 1.8 | 0.8 | 0.4 |
| Dichloroacetic acid | | 9.2 | 13.0 | 21.1 |
| Dichloroacetonitrile | | 3.0 | 2.3 | 2.2 |
| Haloacetic Acids (5) | | 23 | 28 | 39 |
| Haloacetic Acids (6) | | 25 | 31 | 41 |
| Total Trihalomethanes | 1 | 37 | 30 | 31 |
| Trichloroacetic acid | | 13.2 | 14.3 | 17.3 |
| Trichloroacetonitrile | | 0.1 | 0.1 | < 0.1 |
| Nonspecific Organics | | | | |
| Total Organic Carbon (mg/L) | | 2.4 | 1.9 | 1.7 |
| Total Organic Halogen (µg/L) | | 163 | 144 | 114 |
| UV Absorbance @ 254nm (AU) | | 0.032 | 0.034 | 0.031 |

¹ TT indicates that the MCL involves treatment techniques.
² DS indicates that the MCL involves calculations based upon the entire distribution system.

TREATED WATER QUALITY SUMMARY: TREATMENT PLANT EFFLUENT AVERAGES - 1997

The following analyses were performed and each of these constituents was either not detected or the average result was less than the reporting limit. The Maximum Contaminant Level is listed after the analysis in parentheses, if applicable. The unit of measure is also listed if different than that listed for the subsection.

General Bromobenzene Asbestos (7) Bromochloromethane Chlorine, Free Bromomethane Metals (mg/L) Carbon disulfide Aluminum, Available Chloroacetonitrile Antimony, Total (0.006) Chlorobenzene (100) Arsenic, Total (0.05) Chloroethane Boron Chloromethane Beryllium, Total (0.004) cis-1,2-Dichloroethene (70) cis-1,3-Dichloropropene Cadmium, Total (0.005) Chromium, Total (0.1) Dibromomethane Lead, Total (TT1) Dichlorodifluoromethane Mercury, Total (0.002) Dichloromethane (5) Nickel, Total (0.1) Diethyl ether Selenium, Total (0.05) Ethyl Benzene (700) Silver, Total Ethyl methacrylate Thallium, Total (0.002) Hexachlorobutadiene Vanadium Hexachloroethane Ions (mg/L) Iodomethane Isopropyl Benzene Ammonia-Nitrogen Bromide m-Dichlorobenzene Cyanide (0.2) Methacrylonitrile Nitrite-Nitrogen (1) Methyl tert-butylether Radiological (pCi/L) Methylacrylate Alpha, Total (15) Methylmethacrylate Plutonium 239 + 240 Naphthalene Radium-226 n-Butyl Benzene Radon Nitrobenzene Strontium 89 + 90 n-Propyl Benzene Microbiological o-Chlorotoluene o-Dichlorobenzene (600) Cryptosporidium Total Coliform (DS) p-Chlorotoluene p-Dichlorobenzene (78.5) Volatile Organic Compounds(µg/L) Pentachloroethane 1.1.1.2-Tetrachloroethane p-Isopropyl Toluene 1,1,1-Trichloroethane (200) Propionitrile

sec-Butyl Benzene 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane (5) Styrene (100) 1.1-Dichloroethane tert-Butyl Benzene 1,1-Dichloroethene (7) Tetrachloroethene (5) 1,1-Dichloropropene Tetrahydrofuran 1,2,3-Trichlorobenzene Toluene (1000) trans-1,2-Dichloroethene (100) 1,2,3-Trichloropropane 1,2,3-Trimethylbenzene trans-1,3-Dichloropropene 1,2,4-Trichlorobenzene (70) trans-1,4-Dichloro-2-butene Trichloroethylene (5) 1.2.4-Trimethylbenzene Trichlorofluoromethane 1,2-Dichloroethane (5) 1,2-Dichloropropane (5) Vinyl acetate Vinyl Chloride (2) 1,3-dichloropropene Xylenes (10000) 1,3,5-Trimethylbenzene

1,3-Dichloropropane Disinfection By-Products(µg/L)

1-Chlorobutane 2,2-Dichloropropane Carbon tetrachloride (5) 2-Butanone Chlorodibromoacetic Acid 2-Hexanone Chloropicrin 2-Nitropropane Dibromoacetic acid 4-Methyl-2-Pentanone Dibromoacetonitrile Acetone Monobromoacetic Acid

Acrylonitrile Monochloroacetic Acid Allyl chloride Pesticides (µg/L)

Benzene (5) 1,2-Dibromo-3-chloropropane (0.2)

2.4.5-T 2,4-D (70) 2,4-DB 2,4'-DDD 3.5-Dichlorobenzoic acid 3-Hydroxycarbofuran

4,4'-DDD 4,4'-DDE 4,4'-DDT 4-Nitrophenol ூ-BHC Acifluourfen Alachlor (2) Aldicarb Aldicarb sulfone Aldicarb sulfoxide

Aldrin Ametryn Atraton Atrazine (3) ல்-BHC Bentazon Bromacil Butachlor Carbaryl Carbofuran (40) Chlordane (2) Chlorneb Chlorobenzilate Chlorothalonil Chlorpropham Cvanazine

Dacthal Dalapon (200) ⊕-BHC Dicamba Dichlorprop Dichloryos Dieldrin Dinoseb (7) Diphenamid Diquat (100) Dursban

Endosulfan sulfate Endosulfan-A Endosulfan-B Endothall (100) Endrin (2) Endrin Aldehyde **EPTC**

Ethoprop

Cycloate

Ethylene dibromide (0.05)

Etridiazole Glyphosate (700) Heptachlor (0.4) Heptachlor Epoxide (0.2) Hexachlorocyclopentadiene (50)

Hexazinone Lindane (0.2) Malathion

Methiocarb Methomyl Methoxychlor (40) Metolachlor Metribuzin Mevinphos MGK-264 Mirex Molinate

Napropamide Oxamyl (200) Paraquat Pebulate Picloram (500) Prometon Prometryn Pronamide Propachlor Propazine Propoxur Silvex (50) Simazine (4) Simetryn Stirofos Terbacil Terbutryn Terbutylazin Toxaphene (3) Triademefon Trifluralin Vernolate

Synthetic Organic Compounds(µg/L)

1,2,4,5-Tetrachlorobenzene 2,4-Dinitrotoluene 2-Chlorobiphenyl Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene (0.2) Benzo(b)fluoranthene Benzo(g,h,i)perylene Bis(2-ethylhexyl)adipate (400) Butyl benzyl phthalate

Chrysene

Dibenzo(a,h)anthracene Diethyl phthalate Dimethyl phthalate Di-n-butyl phthalate Di-n-octyl phthalate Fluoranthene Fluorene

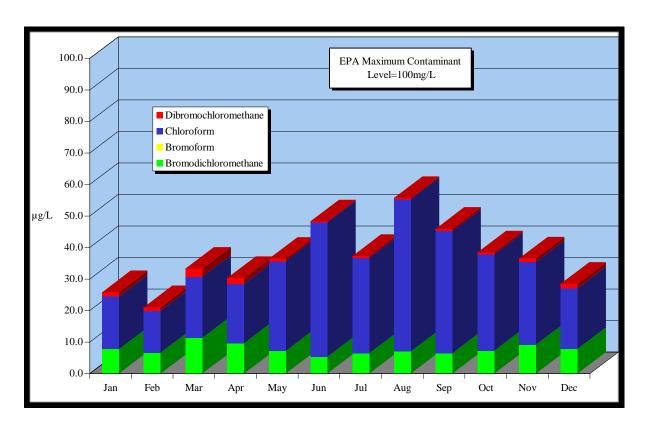
Hexachlorobenzene (1) Indeno(1,2,3-cd)pyrene Isophorone Pentachlorobenzene Pentachlorophenol (1)

Phenanthrene Polychlorinated Biphenyls (0.5)

¹ TT indicates that the MCL involves treatment techniques.

² DS indicates that the MCL involves calculations based upon the entire distribution system.

DISTRIBUTION SYSTEM AVERAGE TRIHALOMETHANES - 1997



Trihalomethanes (THMs) are organic compounds formed when chlorine disinfectant is added to the water. The of chlorine and other chlorine-based disinfectant compounds is mandated by health regulatory agencies to elim microbiological contaminants from drinking water. The creation of THMs is a consequence of this necessary practice. THMs are comprised of four individual compounds. EPA has established 100 μ g/L as the MCL for 7 Trihalomethanes (the sum of the four individual compounds). The amounts present in the Denver distribution system are well below the 100 μ g/L level.

WATER QUALITY SAMPLE COLLECTION AND ANALYTICAL PROCEDURES - 1997

| Samples Collected: | | Analyses Performed: | |
|---------------------|-------|---------------------|--------|
| Watershed | 176 | Microbiological | 9,789 |
| Treatment plant | 615 | Chemical | 42,915 |
| Distribution system | 5,889 | | 52,704 |
| Other | 3,165 | | |
| | 9,845 | | |

Transmission

1997 Facts

| Miles of pipe installed | |
|--|---------|
| Miles of pipe in system | 2,486.1 |
| Miles of nonpotable pipe in system | 15.6 |
| Number of valves operated and maintained | 35,704 |
| Number of nonpotable valves in system | 113 |
| Number of hydrants operated and maintained | |
| Leak Detection Program: | |
| Miles of pipe surveyed | 903 |
| Visible leaks pinpointed | 246 |
| Non-visible leaks detected | 80 |

To View Page C-35 Please go to Table of Contents and Click on:

Transmission Map of Major Distribution Facilities

TRANSMISSION AND DISTRIBUTION MAINS - 1997

 $A. \ \ Mains in service within the City, and mains installed by Denver Water in Total Service Contract Areas. \ ^{1}$

| Size Kind of Pipe 1-1-97 Additions 1" Galvanized Iron 1,818 - 1-1/2" Copper 361 - 2" Galvanized Iron 8,370 - 3" Cement-Asbestos 748 - 3" Ductile Iron 163 2 3" Galvanized Iron 22,822 - 3-1/2" Galvanized Iron 731 - 4" Cast Iron 53,519 - 4" Cement-Asbestos 6,793 - 4" Ductile Iron 29,795 2,640 4" PVC² 4,667 717 4" Steel 2,334 - 6" Cast Iron 2,721,578 23 6" Cement-Asbestos 519,729 - 6" Ductile Iron 670,054 47,036 6" Galvanized Iron 142 - 6" Galvanized Iron 142 - | Reductions (480) (14) (1,413) (10,586) (313) (31) (15,204) (391) (4,806) (21) (8,921) (431) | 12-31-97 1,818 361 7,890 748 151 21,409 731 42,933 6,793 32,122 5,353 2,334 2,706,397 519,338 712,284 142 223,659 6,987 |
|---|--|--|
| 1-1/2" Copper 361 - 2" Galvanized Iron 8,370 - 3" Cement-Asbestos 748 - 3" Ductile Iron 163 2 3" Galvanized Iron 22,822 - 3-1/2" Galvanized Iron 731 - 4" Cast Iron 53,519 - 4" Cement-Asbestos 6,793 - 4" Ductile Iron 29,795 2,640 4" PVC² 4,667 717 4" Steel 2,334 - 6" Cast Iron 2,721,578 23 6" Cast Iron 2,721,578 23 6" Cement-Asbestos 519,729 - 6" Ductile Iron 670,054 47,036 6" Galvanized Iron 142 - 6" Galvanized Iron 142 - 6" PVC² 208,968 14,712 6" | (14) (1,413) (10,586) (313) (31) (15,204) (391) (4,806) (21) (8,921) (431) | 361 7,890 748 151 21,409 731 42,933 6,793 32,122 5,353 2,334 2,706,397 519,338 712,284 142 223,659 6,987 |
| 2" Galvanized Iron 8,370 - 3" Cement-Asbestos 748 - 3" Ductile Iron 163 2 3" Galvanized Iron 22,822 - 3-1/2" Galvanized Iron 731 - 4" Cast Iron 53,519 - 4" Cement-Asbestos 6,793 - 4" Ductile Iron 29,795 2,640 4" PVC² 4,667 717 4" Steel 2,334 - 6" Cast Iron 2,721,578 23 6" Cast Iron 2,721,578 23 6" Ductile Iron 670,054 47,036 6" Galvanized Iron 142 - 6" Galvanized Iron 142 - 6" Steel 6,987 - 6" Steel 6,987 - 6" Steel 6,987 - 8" Cast Iron | (14) (1,413) (10,586) (313) (31) (15,204) (391) (4,806) (21) (8,921) (431) | 7,890 748 151 21,409 731 42,933 6,793 32,122 5,353 2,334 2,706,397 519,338 712,284 142 223,659 6,987 |
| 3" Cement-Asbestos 748 - 3" Ductile Iron 163 2 3" Galvanized Iron 22,822 - 3-1/2" Galvanized Iron 731 - 4" Cast Iron 53,519 - 4" Cement-Asbestos 6,793 - 4" Ductile Iron 29,795 2,640 4" PVC² 4,667 717 4" Steel 2,334 - 6" Cast Iron 2,721,578 23 6" Cement-Asbestos 519,729 - 6" Ductile Iron 670,054 47,036 6" Galvanized Iron 142 - 6" PVC² 208,968 14,712 6" Steel 6,987 - 6" Steel 6,987 - 8" Cast Iron 1,372,022 - 8" Cement-Asbestos 405,973 - | (14) (1,413) (10,586) (313) (31) (15,204) (391) (4,806) (21) (8,921) (431) | 748 151 21,409 731 42,933 6,793 32,122 5,353 2,334 2,706,397 519,338 712,284 142 223,659 6,987 |
| 3" Ductile Iron 163 2 3" Galvanized Iron 22,822 - 3-1/2" Galvanized Iron 731 - 4" Cast Iron 53,519 - 4" Cement-Asbestos 6,793 - 4" Ductile Iron 29,795 2,640 4" PVC² 4,667 717 4" Steel 2,334 - 6" Cast Iron 2,721,578 23 6" Cement-Asbestos 519,729 - 6" Ductile Iron 670,054 47,036 6" Galvanized Iron 142 - 6" PVC² 208,968 14,712 6" Steel 6,987 - 8" Cast Iron 1,372,022 - 8" Cement-Asbestos 405,973 - | (1,413) - (10,586) - (313) (31) - (15,204) (391) (4,806) - (21) - (8,921) (431) | 151 21,409 731 42,933 6,793 32,122 5,353 2,334 2,706,397 519,338 712,284 142 223,659 6,987 |
| 3" Galvanized Iron 22,822 - 3-1/2" Galvanized Iron 731 - 4" Cast Iron 53,519 - 4" Cement-Asbestos 6,793 - 4" Ductile Iron 29,795 2,640 4" PVC² 4,667 717 4" Steel 2,334 - 6" Cast Iron 2,721,578 23 6" Cement-Asbestos 519,729 - 6" Ductile Iron 670,054 47,036 6" Galvanized Iron 142 - 6" PVC² 208,968 14,712 6" Steel 6,987 - 6" Steel 6,987 - 8" Cast Iron 1,372,022 - 8" Cement-Asbestos 405,973 - | (1,413) - (10,586) - (313) (31) - (15,204) (391) (4,806) - (21) - (8,921) (431) | 21,409 731 42,933 6,793 32,122 5,353 2,334 2,706,397 519,338 712,284 142 223,659 6,987 |
| 3-1/2" Galvanized Iron 731 - 4" Cast Iron 53,519 - 4" Cement-Asbestos 6,793 - 4" Ductile Iron 29,795 2,640 4" PVC² 4,667 717 4" Steel 2,334 - 6" Cast Iron 2,721,578 23 6" Cement-Asbestos 519,729 - 6" Ductile Iron 670,054 47,036 6" Galvanized Iron 142 - 6" PVC² 208,968 14,712 6" Steel 6,987 - 8" Cast Iron 1,372,022 - 8" Cement-Asbestos 405,973 - | (10,586) (313) (31) (15,204) (391) (4,806) (21) (8,921) (431) | 731 42,933 6,793 32,122 5,353 2,334 2,706,397 519,338 712,284 142 223,659 6,987 |
| 4" Cast Iron 53,519 - 4" Cement-Asbestos 6,793 - 4" Ductile Iron 29,795 2,640 4" PVC² 4,667 717 4" Steel 2,334 - 6" Cast Iron 2,721,578 23 6" Cement-Asbestos 519,729 - 6" Ductile Iron 670,054 47,036 6" Galvanized Iron 142 - 6" PVC² 208,968 14,712 6" Steel 6,987 - 8" Cast Iron 1,372,022 - 8" Cement-Asbestos 405,973 - | (313) (31) (31) (15,204) (391) (4,806) (21) (8,921) (431) | 42,933 6,793 32,122 5,353 2,334 2,706,397 519,338 712,284 142 223,659 6,987 |
| 4" Ductile Iron 29,795 2,640 4" PVC² 4,667 717 4" Steel 2,334 - 6" Cast Iron 2,721,578 23 6" Cement-Asbestos 519,729 - 6" Ductile Iron 670,054 47,036 6" Galvanized Iron 142 - 6" PVC² 208,968 14,712 6" Steel 6,987 - 8" Cast Iron 1,372,022 - 8" Cement-Asbestos 405,973 - | (31) - (15,204) (391) (4,806) - (21) - (8,921) (431) | 32,122 5,353 2,334 2,706,397 519,338 712,284 142 223,659 6,987 |
| 4" PVC² 4,667 717 4" Steel 2,334 - 6" Cast Iron 2,721,578 23 6" Cement-Asbestos 519,729 - 6" Ductile Iron 670,054 47,036 6" Galvanized Iron 142 - 6" PVC² 208,968 14,712 6" Steel 6,987 - 8" Cast Iron 1,372,022 - 8" Cement-Asbestos 405,973 - | (31) - (15,204) (391) (4,806) - (21) - (8,921) (431) | 5,353 2,334 2,706,397 519,338 712,284 142 223,659 6,987 |
| 4" Steel 2,334 - 6" Cast Iron 2,721,578 23 6" Cement-Asbestos 519,729 - 6" Ductile Iron 670,054 47,036 6" Galvanized Iron 142 - 6" PVC² 208,968 14,712 6" Steel 6,987 - 8" Cast Iron 1,372,022 - 8" Cement-Asbestos 405,973 - | (15,204) (391) (4,806) - (21) - (8,921) (431) | 2,334 2,706,397 519,338 712,284 142 223,659 6,987 |
| 6" Cast Iron 2,721,578 23 6" Cement-Asbestos 519,729 - 6" Ductile Iron 670,054 47,036 6" Galvanized Iron 142 - 6" PVC ² 208,968 14,712 6" Steel 6,987 - 8" Cast Iron 1,372,022 - 8" Cement-Asbestos 405,973 - | (391) (4,806) - (21) - (8,921) (431) | 2,706,397 519,338 712,284 142 223,659 6,987 |
| 6" Cement-Asbestos 519,729 - 6" Ductile Iron 670,054 47,036 6" Galvanized Iron 142 - 6" PVC² 208,968 14,712 6" Steel 6,987 - 8" Cast Iron 1,372,022 - 8" Cement-Asbestos 405,973 - | (391) (4,806) - (21) - (8,921) (431) | 519,338 712,284 142 223,659 6,987 |
| 6" Ductile Iron 670,054 47,036 6" Galvanized Iron 142 - 6" PVC² 208,968 14,712 6" Steel 6,987 - 8" Cast Iron 1,372,022 - 8" Cement-Asbestos 405,973 - | (4,806) - (21) - (8,921) (431) | 712,284 142 223,659 6,987 |
| 6" Galvanized Iron 142 - 6" PVC² 208,968 14,712 6" Steel 6,987 - 8" Cast Iron 1,372,022 - 8" Cement-Asbestos 405,973 - | (21) - (8,921) (431) | 142 223,659 6,987 |
| 6" PVC ² 208,968 14,712 6" Steel 6,987 - 8" Cast Iron 1,372,022 - 8" Cement-Asbestos 405,973 - | (8,921) (431) | 223,659 6,987 |
| 6" Steel 6,987 - 8" Cast Iron 1,372,022 - 8" Cement-Asbestos 405,973 - | (8,921) (431) | 6,987 |
| 8" Cast Iron 1,372,022 - 8" Cement-Asbestos 405,973 - | (431) | |
| · · · · · · · · · · · · · · · · · · · | | 1,363,101 |
| 8" Ductile Iron 703,394 19,315 | (1.6.4) | 405,542 |
| | (164) | 722,545 |
| 8" PVC ² 264,219 55,779 | (327) | 319,671 |
| 8" Steel 13,160 - | - | 13,160 |
| 10" Cast Iron 79,266 3 | (10) | 79,259 |
| 10" Cement-Asbestos 2,444 - 10" Ductile Iron 964 16 | - | 2,444 980 |
| 2 | - | |
| 10" PVC ² 17 11 10" Steel 141 - | - | 28 141 |
| 12" Cast Iron 1,339,463 - | (2,311) | 1,337,152 |
| 12" Cement-Asbestos 328,386 - | (17) | 328,369 |
| 12" Ductile Iron 515,583 11,679 | (672) | 526,590 |
| 12" PVC ² 139,688 16,297 | (8) | 155,977 |
| 12" Steel 92,029 41 | - | 92,070 |
| 14" Cast Iron 36,185 - | (117) | 36,068 |
| 14" Cement-Asbestos 1,917 - | - | 1,917 |
| 14" Ductile Iron 85 21 | - | 106 |
| 14" Steel 50 - 15" Cast Iron 4,473 - | - | 50 4,473 |
| 16" Cast Iron 173,894 - | (1,645) | 172,249 |
| 16" Cement-Asbestos 21,990 - | - | 21,990 |
| 16" Concrete 4,904 - | - | 4,904 |
| 16" Ductile Iron 157,879 5,344 | (366) | 162,857 |
| 16" Steel 40,910 34 | - | 40,944 |
| 18" Cast Iron 24,031 - 18" Concrete 1,564 - | - | 24,031 1,564 |
| 18" Ductile Iron 441 - | - | 441 |
| 18" Steel 22,273 - | - | 22,273 |
| 20" Cast Iron 40,872 - | (6) | 40,866 |
| 20" Concrete 3,944 - | - | 3,944 |
| 20" Ductile Iron 26,255 19 | - | 26,274 |
| 20" Steel 34,016 3,233 | - | 37,249 |
| 24" Cast Iron 166,402 - | - | 166,402 |
| 24" CMC Steel ³ 12,961 - | - | 12,961 |
| 24" Concrete 79,713 - 24" Ductile Iron 89,373 28 | (28) | 79,713 89,373 |
| 24" Ductile Iron 89,373 28 24" Steel 65,570 4 | (28) (4) | 65,570 |
| 30" Cast Iron 64,290 - | - | 64,290 |
| 30" CMC Steel ³ 12 - | _ | 12 |
| 30" Concrete 159,599 - | - | 159,599 |
| 30" Ductile Iron 114 - | - | 114 |
| 30" Steel 176,393 111 | (19) | 176,485 |
| 36" Cast Iron 23,142 - | (29) | 23,113 |
| 36" Cement-Asbestos 6,278 - | (22) | 6,278 |
| 36" Steel 234,129 99 36" Concrete 123,354 - | (23) | 234,205 |
| | - | 123,354 |
| 36" CMC Steel ³ 64 - 36" Ductile Iron 2,548 - | - - | 64 2,548 |
| 42" Cast Iron 468 - | - | 468 |
| 42" CMC Steel ³ 11 - | _ | 11 |
| 42" Concrete 85,128 - | (48) | 85,080 |
| 42" Steel 105,638 48 | - | 105,686 |

¹Excludes totals for City of Littleton.

 $^{^{2}}$ PVC = Polyvinyl chloride (plastic).

 $^{^3}$ CMC Steel = Cement mortar coated steel.

TRANSMISSION AND DISTRIBUTION MAINS - 1997 (Continued)

 $A. \ \ Mains in service within the City, and mains installed by Denver Water in Total Service Contract Areas (Continued). \\ ^{1}$

| | | Length in Feet | | | | |
|------|------------------------|----------------|-----------|------------|------------|--|
| Size | Kind of Pipe | 1-1-97 | Additions | Reductions | 12-31-97 | |
| 46" | Concrete | 23,431 | - | - | 23,431 | |
| 46" | Steel | 20 | - | - | 20 | |
| 48" | Cast Iron | 27 | - | - | 27 | |
| 48" | Concrete | 17,365 | - | - | 17,365 | |
| 48" | Steel | 118,826 | - | - | 118,826 | |
| 51" | Outside Diameter Steel | 6,330 | - | - | 6,330 | |
| 54" | CMC Steel ² | 19,988 | - | - | 19,988 | |
| 54" | Concrete | 21,828 | - | - | 21,828 | |
| 54" | Steel | 117,014 | - | - | 117,014 | |
| 57" | Outside Diameter Steel | 12,851 | - | - | 12,851 | |
| 60" | Concrete | 126,357 | - | (48) | 126,309 | |
| 60" | Steel | 54,081 | 48 | - | 54,129 | |
| 63" | Outside Diameter Steel | 17,563 | - | - | 17,563 | |
| 66" | Concrete | 67,015 | - | (64) | 66,951 | |
| 66" | Steel | 18,916 | 64 | - | 18,980 | |
| 67" | Steel | 1,009 | - | - | 1,009 | |
| 72" | Concrete | 59,834 | - | - | 59,834 | |
| 72" | Steel | 40,315 | - | - | 40,315 | |
| 84" | Concrete | 6,147 | - | - | 6,147 | |
| 84" | Steel | 10,501 | - | - | 10,501 | |
| 90" | Concrete | 2,955 | - | - | 2,955 | |
| 90" | Steel | 29,049 | - | - | 29,049 | |
| 108" | Steel | 48,687 | | | 48,687 | |
| | Totals | 12,327,307 | 177,324 | (48,517) | 12,456,114 | |

B. Mains in service within Total Service Contract Areas at the beginning of the contract (estimated). 1

| | | | Length in Feet | | | | |
|------|-----------------|---------|----------------|------------|----------|--|--|
| Size | Kind of Pipe | 1-1-97 | Additions | Reductions | 12-31-97 | | |
| 2" | Galvanized Iron | 592 | 260 | (260) | 592 | | |
| 3" | Cast Iron | 112 | - | ` - | 112 | | |
| 3" | Galvanized Iron | 2,133 | - | - | 2,133 | | |
| 4" | Cast Iron | 23,852 | 18 | (1,160) | 22,710 | | |
| 4" | Cement-Asbestos | 3,498 | - | (2,752) | 746 | | |
| 4" | Ductile Iron | 268 | - | - | 268 | | |
| 4" | PVC^3 | 13 | - | - | 13 | | |
| 6" | Cast Iron | 303,475 | 2,948 | (8,164) | 298,259 | | |
| 6" | Cement-Asbestos | 59,532 | - | (187) | 59,345 | | |
| 6" | Ductile Iron | 897 | 1 | - | 898 | | |
| 6" | PVC^3 | 4,031 | - | - | 4,031 | | |
| 8" | Cast Iron | 129,468 | 317 | (493) | 129,292 | | |
| 8" | Cement-Asbestos | 46,591 | - | - | 46,591 | | |
| 8" | Ductile Iron | 4,275 | 1,028 | (1,028) | 4,275 | | |
| 8" | PVC^3 | 3,311 | - | - | 3,311 | | |
| 10" | Cast Iron | 11,583 | - | (3) | 11,580 | | |
| 12" | Cast Iron | 51,225 | - | (12) | 51,213 | | |
| 12" | Cement-Asbestos | 23,985 | 101 | (101) | 23,985 | | |
| 12" | Ductile Iron | 3,728 | - | - | 3,728 | | |
| 12" | PVC^3 | 2,953 | - | - | 2,953 | | |
| 16" | Cast Iron | 2,638 | - | - | 2,638 | | |
| 16" | Ductile Iron | 5,060 | | | 5,060 | | |
| | Totals | 683,220 | 4,673 | (14,160) | 673,733 | | |

C. Total Mains

| | Length | ength in Feet Length in | | in Miles |
|------------------------|------------|-------------------------|---------|----------|
| Kind of Pipe | 1-1-97 | 12-31-97 | 1-1-97 | 12-31-97 |
| Cast Iron | 6,621,985 | 6,576,633 | 1,254.1 | 1,245.6 |
| Cement-Asbestos | 1,427,864 | 1,424,086 | 270.4 | 269.7 |
| CMC Steel ² | 33,036 | 33,036 | 6.3 | 6.3 |
| Concrete | 783,138 | 782,978 | 148.3 | 148.3 |
| Copper | 361 | 361 | 0.1 | 0.1 |
| Ductile Iron | 2,210,876 | 2,290,614 | 418.7 | 433.8 |
| Galvanized Iron | 36,608 | 34,715 | 6.9 | 6.5 |
| PVC ³ | 627,867 | 714,996 | 118.9 | 135.4 |
| Steel | 1,268,792 | 1,269,161 | 240.3 | 240.4 |
| Totals | 13,010,527 | 13,126,580 | 2,464.0 | 2,486.1 |

¹Excludes totals for City of Littleton.

²CMC Steel = Cement mortar coated steel.

³PVC = Polyvinyl chloride (plastic).

VALVES - 1997

A. Valves in service within the City and valves installed by Denver Water in Total Service Contract Areas¹.

| Size | Type of Valve | Total ¹ 1-1-97 | Additions | Reductions | Total ¹ 12-31-97 |
|------------|-----------------------------|------------------------------|-----------|------------|--------------------------------|
| 1" | Gate | 10 | _ | _ | 10 |
| 1-1/4" | Gate | 5 | - | - | 5 |
| 1-1/2" | Gate | 20 | - | - | 20 |
| 2" | Gate | 121 | - | (1) | 120 |
| 2" | Pressure Regulating | 1 | - | - | 1 |
| 2-1/2" | Gate | 1 | - | - | 1 |
| 3" 4" | Gate | 96 1 | 1 | (26) | 71 |
| 4 4" | Check Gate | 411 | 26 | (26) | 1 411 |
| 4" | Pressure Regulating | 5 | - | (20) | 5 |
| 6" | Butterfly | 1 | - | - | 1 |
| 6" | Check | 9 | - | - | 9 |
| 6" | Gate | 13,318 | 373 | (120) | 13,571 |
| 6" | Pressure Regulating | 71 | - | - | 71 |
| 8" | Ball | 1 | - | - | 1 |
| 8" | Butterfly | 2 | - | = | 2 |
| 8" 8" | Check Gate | 11 9,500 | 347 | (41) | 11 9,806 |
| 8" | Pressure Regulating | 9,300 49 | 1 | (1) | 49 |
| 8" | Cone | 1 | - | - | 1 |
| 10" | Ball | 2 | _ | - | 2 |
| 10" | Butterfly | 1 | - | - | 1 |
| 10" | Check | 1 | - | - | 1 |
| 10" | Gate | 399 | 4 | (2) | 401 |
| 10" | Pressure Regulating | 20 | - | (1) | 19 |
| 12" | Ball | 1 | - | - | 1 |
| 12" 12" | Butterfly Check | 6 5 | - | - | 6 5 |
| 12" | Cone | 1 | - | _ | 1 |
| 12" | Gate | 8,226 | 178 | (17) | 8,387 |
| 12" | Pressure Regulating | 20 | 1 | - | 21 |
| 14" | Butterfly | 2 | - | - | 2 |
| 14" | Cone | 1 | - | - | 1 |
| 14" | Gate | 58 | - | - | 58 |
| 14" | Pressure Regulating | 3 | - | - | 3 |
| 15" 16" | Gate Ball | 4 4 | - | - | 4 4 |
| 16" | Butterfly | 172 | 1 | - | 173 |
| 16" | Check | 1 | - | _ | 1 |
| 16" | Cone | 6 | _ | - | 6 |
| 16" | Gate | 141 | - | (4) | 137 |
| 16" | Pressure Regulating | 9 | - | = | 9 |
| 18" | Butterfly | 8 | - | - | 8 |
| 18" | Cone | 2 | - | - | 2 |
| 18" | Gate | 38 | - | - | 38 |
| 18" 20" | Pressure Regulating Ball | 1 5 | - | - | 1 5 |
| 20" | Butterfly | 127 | 4 | - | 131 |
| 20" | Gate | 40 | · - | _ | 40 |
| 20" | Pressure Regulating | 4 | - | - | 4 |
| 24" | Ball | 1 | - | - | 1 |
| 24" | Butterfly | 355 | 2 | - | 357 |
| 24" | Cone | 1 | - | - | 1 |
| 24" | Gate | 174 | - | (1) | 173 |
| 24" | Pressure Regulating | 4 | - | = | 4 |
| 30" 30" | Ball Butterfly | 4 80 | - | - | 4 80 |
| 30" | Check | 2 | - | - | 2 |
| 30" | Cone | 9 | - | - | 9 |
| | | • | | | |

¹Valves in supply mains and station piping valves are not included.

(Continued next page)

VALVES - 1997 (Continued)

 $A. \ \ Valves \ in service \ within \ the \ City \ and \ valves \ installed \ by \ Denver \ Water \ in \ Total \ Service \ Contract \ Areas \ (Continued).$

| Size | Type of Valve | Total ¹ 1-1-97 | Additions | Reductions | Total ¹ 12-31-97 |
|------|---------------------|------------------------------|-----------|------------|-----------------------------|
| 30" | Gate | 80 | - | - | 80 |
| 30" | Pressure Regulating | 1 | - | - | 1 |
| 36" | Ball | 2 | - | - | 2 |
| 36" | Butterfly | 90 | 2 | - | 92 |
| 36" | Cone | 6 | - | (1) | 5 |
| 36" | Gate | 45 | - | (3) | 42 |
| 42" | Butterfly | 46 | 1 | - | 47 |
| 42" | Check | 2 | - | - | 2 |
| 42" | Gate | 7 | - | - | 7 |
| 48" | Butterfly | 15 | 1 | - | 16 |
| 48" | Check | 1 | - | - | 1 |
| 48" | Cone | 1 | - | - | 1 |
| 48" | Gate | 10 | - | - | 10 |
| 54" | Butterfly | 13 | - | - | 13 |
| 54" | Gate | 7 | - | - | 7 |
| W" | Butterfly | 3 | 1 | - | 4 |
| W | Gate | 9 | - | - | 9 |
| 72" | Butterfly | 4 | - | - | 4 |
| 84" | Butterfly | 5 | <u>-</u> | | 5 |
| | Totals | 33,919 | 943 | (244) | 34,618 |

B. Valves within Total Service Contract Areas at beginning of the contract (estimated). 2

| | | Total ¹ | | | Total ¹ |
|------|---------------------|--------------------|-----------|------------|--------------------|
| Size | Type of Valve | 1-1-97 | Additions | Reductions | 12-31-97 |
| 3" | Gate | 3 | - | - | 3 |
| 4" | Gate | 45 | 1 | (5) | 41 |
| 6" | Check | 1 | - | - | 1 |
| 6" | Gate | 594 | 4 | (14) | 584 |
| 6" | Pressure Regulating | 4 | - | (1) | 3 |
| 8" | Check | 1 | - | - | 1 |
| 8" | Gate | 306 | 7 | (7) | 306 |
| 8" | Pressure Regulating | 3 | - | (1) | 2 |
| 10" | Gate | 25 | - | (1) | 24 |
| 10" | Pressure Regulating | 2 | - | - | 2 |
| 12" | Gate | 110 | 1 | (1) | 110 |
| 16" | Butterfly | 1 | - | - | 1 |
| 16" | Gate | 8 | | | 8 |
| | Totals | 1,103 | 13 | (30) | 1,086 |

C. Total Valves.1

| Type of Valve | Total ¹ 1-1-97 | Additions | Reductions | Total ¹ 12-31-97 |
|---------------------|------------------------------|-----------|------------|-----------------------------|
| Ball | 20 | - | - | 20 |
| Butterfly | 931 | 12 | - | 943 |
| Check | 35 | - | - | 35 |
| Cone | 28 | - | (1) | 27 |
| Gate | 33,811 | 942 | (269) | 34,484 |
| Pressure Regulating | 197 | 2 | (4) | 195 |
| Totals | 35,022 | 956 | (274) | 35,704 |

¹Valves in supply mains and station piping valves are not included.

 $^{^2 \}mbox{Excludes}$ totals for City of Littleton.

FIRE HYDRANTS - 1997

A. Fire hydrants in service within the City and fire hydrants installed by Denver Water in Total Service Contract Areas.

| Fire Hydrants 4" 6" Totals | Total ¹ 1-1-97 20 12,792 12,812 | Additions - 519 519 | Reductions (4) (219) (223) | Total ¹ 12-31-97 16 13,092 13,108 |
|--|---|--|---|--|
| Hydrant Branch Valves 6" 8" Totals | 12,692 3 12,695 | 404 | (119) - (119) | 12,977 3 12,980 |
| Hydrant Branch Pipe (Length in feet 4" Cast Iron 6" Cast Iron 6" Ductile Iron 6" PVC 6" Steel 8" Ductile Iron 8" Steel Totals B. Fire hydrants in service within Total | 238 105,548 101,808 951 14,713 11 397 223,666 | 6,972 - - - - - - - - - - - - - - - - - - - | (27) (1,219) (242) (15) - - (1,503) | 211 104,329 108,538 936 14,713 11 397 229,135 |
| <u>Fire Hydrants</u> 6" Totals ² | 486 486 | <u>8</u> <u>8</u> | (27) (27) | 467 467 |
| <u>Hydrant Branch Valves</u> 6" Totals ² | 491 491 | <u>8</u> <u>8</u> | (21) (21) | 478 478 |
| Hydrant Branch Pipe (Length in fee 4" Cast Iron 4" Cement-Asbestos 6" Cast Iron 6" Cement-Asbestos 6" Ductile Iron Totals ² C. Total Fire Hydrants | 177 4 7,733 327 1,164 9,405 | 75 - 67 142 | (56) (200) (67) (323) | 121 4 7,608 327 1,164 9,224 |
| Fire Hydrants 4" 6" Totals | 20 13,278 13,298 | 527 527 | (4) (246) (250) | 16 13,559 13,575 |
| Hydrant Branch Valves 6" 8" Totals | 13,183 3 13,186 | 412 | (140) - (140) | 13,455 3 13,458 |
| Hydrant Branch Pipe (Length in fee 4" Cast Iron 4" Cement-Asbestos 6" Cast Iron 6" Cement-Asbestos 6" Ductile Iron 6" PVC 6" Steel 8" Ductile Iron 8" Steel | 415 4 113,281 327 102,972 951 14,713 11 397 233,071 | 75 - 7,039 - - - - 7,114 | (83) - (1,419) - (309) (15) (1,826) | 332 4 111,937 327 109,702 936 14,713 11 397 238,359 |

¹Excludes totals for City of Littleton.

²Totals revised from 1981.

NONPOTABLE MAINS AND VALVES - 1997

NONPOTABLE MAINS

| | | | Length in Feet | | | | |
|----------|--------------|--------|----------------|------------|----------|--|--|
| | | Total | | | Total | | |
| Size | Kind of Pipe | 1-1-97 | Additions | Reductions | 12-31-97 | | |
| 4" | PVC | 3,325 | 2 | | 3,327 | | |
| 6" | PVC | 540 | - | - | 540 | | |
| 8" | Steel | 61 | - | - | 61 | | |
| 10" | Steel | 22 | - | - | 22 | | |
| 12" | Steel | 10,307 | - | - | 10,307 | | |
| 12" | PVC | 16,712 | 4,750 | - | 21,462 | | |
| 16" | PVC | 19,839 | - | - | 19,839 | | |
| 20" | PVC | 26,958 | | | 26,958 | | |
| | Totals | 77,764 | 4,752 | <u> </u> | 82,516 | | |
| Summary: | | | Length in Feet | | | | |
| • | | Total | | | Total | | |
| | Kind of Pipe | 1-1-97 | Additions | Reductions | 12-31-97 | | |
| | PVC | 67,374 | 4,752 | - | 72,126 | | |
| | Steel | 10,390 | | | 10,390 | | |
| | Totals | 77,764 | 4,752 | | 82,516 | | |
| | | | | | | | |
| | | | | | | | |

NONPOTABLE VALVES

| | | Total | | | Total |
|------------|---------------|--------|-----------|------------|----------|
| Size 4" | Type of Valve | 1-1-97 | Additions | Reductions | 12-31-97 |
| 4" | Gate | 13 | 1 | - | 14 |
| 6" | Gate | 6 | - | - | 6 |
| 8" | Gate | 1 | - | - | 1 |
| 10" | Gate | 2 | - | - | 2 |
| 12" | Gate | 53 | 11 | - | 64 |
| 20" | Gate | 26 | | | 26 |
| | Totals | 101 | 12 | | 113 |

Note: Dual distribution system mains and valves have been installed to deliver water for nonpotable uses at Denver International Airport. Nonpotable water will not be available in the dual distribution system prior to the construction of a nonpotable reuse plant in 2004.

BREAKS IN MAINS, WATER CONTROL AND LEAK DETECTION SERVICES - 1997

DENVER MAIN BREAKS

TOTAL SERVICE MAIN BREAKS

| Size | Kind of Pipe | Number of Breaks | Size | Kind of Pipe | Number of Breaks |
|------|-----------------|---------------------|------|-----------------|------------------|
| 2" | Galvanized Iron | 1 | 4" | Cement Asbestos | 1 |
| 2" | Cast Iron | 1 | 4" | Ductile Iron | 1 |
| 3" | Cast Iron | 1 | 6" | Cast Iron | 24 |
| 6" | Ductile Iron | 2 | 6" | Ductile Iron | 8 |
| 6" | Cast Iron | 153 | 8" | Cast Iron | 17 |
| 6" | PVC | 1 | 8" | Ductile Iron | 5 |
| 6" | Cement Asbestos | 1 | 12" | Cast Iron | 2 |
| 8" | Cast Iron | 59 | 18" | Coated Steel | 2 |
| 8" | PVC | 2 | | Total | 60 |
| 8" | Ductile Iron | 2 | | | |
| 12" | Cast Iron | 23 | | | |
| 12" | Cement Asbestos | 1 | | | |
| 12" | Ductile Iron | 2 | | | |
| 16" | Cast Iron | 2 | | | |
| | Total | 251 | | | |

WATER CONTROL SERVICES

| | <u>1997</u> | <u>1996</u> | <u>1995</u> | <u>1994</u> | 1993 |
|---|-------------|-------------|-------------|-------------|--------|
| Service Calls | 1,540 | 2,103 | 2,040 | 2,056 | 2,094 |
| Service Leaks | 591 | 648 | 548 | 631 | 635 |
| Service Turn Ons | 2,492 | 2,520 | 2,317 | 1,791 | 2,194 |
| Service Turn Offs | 815 | 975 | 600 | 613 | 892 |
| Valve Leaks | 68 | 72 | 98 | 76 | 108 |
| | | | | | |
| Fire Hydrants Hit | 138 | 106 | 94 | 105 | 115 |
| Fire Hydrants Packed and Greased | 24,969 | 13,726 | 16,626 | 14,936 | 13,572 |
| Fire Hydrants Excavated for Replacement | 206 | 205 | 213 | 181 | 149 |
| Fire Hydrants, Miscellaneous Repairs | 875 | 857 | 1,153 | 973 | 987 |
| Total Fire Hydrants Tested and Repaired | 26,188 | 14,894 | 18,086 | 16,195 | 14,823 |

LEAK DETECTION PROGRAM

| | <u>1997</u> | <u>1996</u> | <u>1995</u> | <u>1994</u> | <u>1993</u> |
|---|-------------|-------------|-------------|-------------|-------------|
| Non-Visible Leaks Detected | 80 | 49 | 71 | 52 | 33 |
| Non-Visible Water Leaks Loss (1000's of Gallons) ¹ | 105,120 | 128,772 | 186,588 | 273,312 | 183,960 |
| Visible Leaks Pinpointed | 246 | 193 | 159 | 205 | 200 |
| Savings Generated from Leak Detection Program ¹ | \$147,600 | \$115,800 | \$95,400 | \$123,000 | \$120,000 |
| Miles Surveyed | 903 | 858 | 1,038 | 726 | 523 |

¹Estimated.

Financial

DEBT SERVICE COVERAGE: 1988 - 1997 (amounts expressed in thousands)

| Fiscal | Gross | | Net Revenue Available for | | ervice Requ | irements ⁴ | |
|--------|----------------------|-----------------------|------------------------------|------------------------|-------------|-----------------------|----------|
| Year | Revenue ¹ | Expenses ² | Debt Service | Principal ³ | Interest | Total | Coverage |
| 1988 | 91,939 | 44,349 | 47,590 | 4,315 | 15,718 | 20,033 | 2.38 |
| 1989 | 94,580 | 50,006 | 44,574 | 1,205 | 15,726 | 16,931 | 2.63 |
| 1990 | 90,666 | 58,233 | 32,433 | 8,749 | 15,350 | 24,099 | 1.35 |
| 1991 | 85,325 | 58,415 | 26,910 | 1,250 | 14,944 | 16,194 | 1.66 |
| 1992 | 88,104 | 56,901 | 31,203 | 2,473 | 19,351 | 21,824 | 1.43 |
| 1993 | 92,337 | 61,503 | 30,834 | 2,704 | 18,520 | 21,224 | 1.45 |
| 1994 | 107,730 | 65,384 | 42,346 | 4,520 | 15,635 | 20,155 | 2.10 |
| 1995 | 100,242 | 66,150 | 34,092 | 7,112 | 18,855 | 25,967 | 1.31 |
| 1996 | 120,244 | 69,185 | 51,059 | 6,401 | 16,588 | 22,989 | 2.22 |
| 1997 | 131,750 | 70,287 | 61,463 | 5,437 | 16,327 | 21,764 | 2.82 |

¹Total operating and nonoperating revenue including interest income.

²Total operating and nonoperating expenses, excluding depreciation and amortization, and interest expense.

³Principal payments have been decreased for bonds refunded through the annual bond refunding program.

⁴Effective 1992, includes Certificates of Participation.

ADDITIONS TO PROPERTY, PLANT AND EQUIPMENT - 1997

(amounts expressed in thousands)

NEW FACILITIES

| SOURCE OF SUPPLY | | | |
|--|--------|----|--------|
| South Platte Improvements | \$ 2,5 | 20 | |
| Williams Fork Collection System | | 49 | |
| Eagle Piney/Eagle Colorado System | | 75 | |
| Water Rights | | 04 | |
| Hydro Power Development | | 99 | |
| Miscellaneous Land Acquisitions | | 08 | |
| Moffat Tunnel System | | 59 | |
| Marston Lake Conduit 20 Extension | 4,8 | | |
| Platte Canyon Outlet | | 11 | |
| Alternate Irrigation Sources | 2 | 61 | |
| Other | 1 | 24 | |
| Total Source of Supply | | | 10,027 |
| PUMPING PLANT AND CLEAR WATER STORAGE | | | |
| Kendrick - Natural Gas Engines | 2 | 72 | |
| Marston - Natural Gas Engines | 2 | 56 | |
| 56th Ave - Yard Piping Modifications | 6 | 59 | |
| Chatfield - Expansion of Pump Station | 2 | 70 | |
| Xeriscape & Landscaping | 2 | 04 | |
| Other Miscellaneous | | 17 | |
| Total Pumping Plant and Clear Water Storage | | | 1,678 |
| WATER TREATMENT | | | |
| Denver International Airport - Non-Potable Water Project | 4 | 58 | |
| South Platte Downstream Gravel Pit Non-Potable Reuse Storage | 1 | 54 | |
| Marston Treatment Plant Improvements | 2,8 | 58 | |
| Other Miscellaneous | 3 | 23 | |
| Total Water Treatment | | | 3,793 |
| TRANSMISSION AND DISTRIBUTION | | | |
| Denver International Airport Conduit and Mains | 6 | 43 | |
| Conduit 129 Phase 3 | 1 | 26 | |
| Conduit 74 Phase 4 | 1 | 05 | |
| Other | 3 | 87 | |
| Total Transmission and Distribution | | | 1,261 |
| GENERAL PLANT | | | |
| Xeriscape - New T&D Building | 5 | 38 | |
| Automated Meter Reading | | 87 | |
| Other | 1 | 18 | 742 |
| | | _ | 743 |
| TOTAL NEW FACILITIES | | _ | 16,759 |
| FACILITY REPLACEMENTS AND IMPROVEMENTS | | | |
| SOURCE OF SUPPLY | | | |
| Highline Canal | | 87 | |
| Deckers Refurbishment | | 57 | |
| Ralston Reservoir | 1 | 43 | |
| Cheeseman Reservoir - Drian Line Modifications | | 80 | |
| Marston Lake South Tower Relocation | | 96 | |
| Roberts Tunnel Storage Shed | | 43 | |
| Dillon reservoir | | 46 | |
| Long Lakes | | 81 | |
| Other | 5 | 54 | |
| Total Source of Supply | | | 1,043 |

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ADDITIONS TO PROPERTY, PLANT AND EQUIPMENT - 1997 (Continued) (amounts expressed in thousands)

FACILITY REPLACEMENTS AND IMPROVEMENTS (Continued)

| PUMPING PLANT AND CLEAR WATER STORAGE | | |
|--|---------------|-----------|
| 56th Avenue Pump Station - Yard Piping | \$105 | |
| Capitol Hill - Motor Controllers | 55 | |
| Water Quality Monitoring Telemetry at Various Stations | 90 | |
| Other | 155 | |
| Total Pumping Plant and Clear Water Storage | | 405 |
| WATER TREATMENT | | |
| Moffat Distributed Control System | 78 | |
| Marston Dissinfection Facilities | 100 | |
| Pilot Water Facilities @ Marston and Foothills | 57 | |
| Foothills Dissinfection Facilities | 71 | |
| Moffat Dissinfection Facilities | 99 | |
| Foothills Flocculation Drive Replacement | 224 | |
| Moffat Dry Chemical Storage | 429 | |
| Moffat Slide Gates | 155 | |
| Foothills Backup Generator | 855 | |
| Foothills Pottasium Permanganate Feed System | 286 | |
| Telemetry & Control | 320 | |
| Other | 423 | |
| Total Water Treatment | | 3,097 |
| TRANSMISSION AND DISTRIBUTION | | |
| Valve Replacements | 213 | |
| Mains - Replace, Extend, and Relocate | 9,421 | |
| Fire Hydrants - Install and Replace | 1,095 | |
| New Mains | 5,550 | |
| Ashland Reservoir Site Improvements | 184 | |
| Cement Mortar Lining Rehabilitation Program | 970 | |
| Other | 747 | |
| Total Transmission and Distribution | | 18,180 |
| GENERAL PLANT | | |
| Remodel Building 13 | 377 | |
| Other | 989 | |
| Total General Plant | _ | 1,366 |
| TOTAL FACILITY REPLACEMENTS AND IMPROVEMENTS | | 24,091 |
| GENERAL EQUIPMENT ADDITIONS, REPLACEMENTS, AND IMPRO | <u>OVEMEN</u> | <u>TS</u> |
| Motor Vehicles and Heavy Equipment | 1,799 | |
| Computer Equipment | 1,799 | |
| Capitalized Software | 1,565 | |
| Other | 2,033 | |
| Oulei | 2,033 | |
| TOTAL GENERAL EQUIPMENT | _ | 6,814 |
| | | |
| TOTAL PLANT ADDITIONS | | 47,664 |

WATER RATE SCHEDULES - 1997

| | Rate Per 1,000 Gallons | | | | |
|---|------------------------|---------------------|----------------------|--|--|
| | City of | Outside City | Outside City | | |
| | Denver | Total Service | Read and Bill | | |
| | Schedule 1 | Schedule 2 | Schedule 3 | | |
| | (Effective for | bills dated on or a | after Jan. 1, 1997) | | |
| CONSUMPTION CHARGE (Bimonthly) | | | | | |
| Residential: | | | | | |
| First 22,000 Gallons | \$ 1.30 | \$ 2.13 | \$ 1.66 | | |
| Over 22,000 Gallons | 1.56 | 2.56 | 1.99 | | |
| Small Multi-Family: | | | | | |
| (Duplexes through five-plexes with a single meter) | | | | | |
| First 30,000 gallons ¹ | 1.16 | 1.90 | 1.61 | | |
| Over 30,000 gallons | 1.39 | 2.28 | 1.93 | | |
| All Other Retail Customers: | | | | | |
| All Consumption | 1.16 | 2.00 | 1.64 | | |
| SERVICE CHARGE | | | | | |
| Monthly | \$ 3.81 | \$ 3.81 | \$ 3.81 | | |
| Bimonthly | 5.18 | 5.18 | 5.18 | | |
| PRIVATE FIRE PROTECTION SERVICE CHARGES (Bimonthly) | | | | | |
| Fire Hydrants | \$ 23.05 | \$ 15.85 | \$ 11.84 | | |
| Sprinkler Systems and Standpipes: | | | | | |
| (Size of Connection) | | | | | |
| 1" | 6.26 | 4.30 | 3.22 | | |
| 2" | 10.44 | 7.18 | 5.36 | | |
| 4" | 16.14 | 11.10 | 8.29 | | |
| 6" | 23.05 | 15.85 | 11.84 | | |
| 8" | 40.34 | 27.74 | 20.72 | | |
| 10" | 57.63 | 39.63 | 29.60 | | |
| 12" | 92.20 | 63.41 | 47.37 | | |
| 16" | 230.51 | 158.54 | 118.42 | | |
| OUTSIDE CITY WHOLESALE RATE - Schedule 4 | | <u>R</u> | ate per 1,000 gallor | | |
| Consumption Charge - all consumption | | | \$ 1.65 | | |

Service Charge - Not applicable for this rate schedule

Applicability

Schedule 1: All licensees with metered service having the right to take and use water inside the territorial limits of the City and County of Denver.

Schedule 2: All licensees outside the territorial limits of the City and County of Denver who receive water service from the Board of Water Commissioners under agreements whereby the Board operates and maintains all of the systems used to supply the licensee in a manner to provide complete and total service similar to that furnished inside Denver.

Schedule 3: All licensees outside the territorial limits of the City and County of Denver who receive water service from the Board of Water Commissioners under agreements whereby the licensee in some manner operates and maintains portions of the system used to supply the licensee and the Board is responsible for billing each licensee on an individual basis.

Schedule 4: Municipalities, quasi-municipal districts and water companies outside the territorial limits of the City and County of Denver who receive water service from the Board of Water Commissioners under agreements whereby the municipalities, quasi-municipalities, and water companies operate and maintain water distribution systems to supply individual licensees. The Board bills only the distributor for water delivered through large "Master Meters" and the distributor establishes the rates for and bills the individual licensees.

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¹Bimonthly usage amounts increase by 12,000 gallons per additional dwelling unit up to 5 dwelling units.

WATER RATE SCHEDULES - 1997 (Continued)

| | | Raw Water Service | | | |
|--|----|-------------------|----|----------|--|
| | D | Denver | | ide City | |
| RAW WATER SERVICE RATE - Schedule 5 | | | ' | _ | |
| Consumption Charge per 1,000 gallons - all consumption | \$ | 0.47 | \$ | 0.49 | |
| Consumption Charge per Acre Foot - all consumption | | 153.15 | | 159.67 | |

Service Charge - Not applicable for this rate schedule

SYSTEM DEVELOPMENT CHARGES (Effective January 1, 1986)

| | Treated Water Service | | | |
|-----------------|-----------------------|--------------|-----------|--|
| Connection Size | Denver | Outside City | Service | |
| 3/4" | \$ 2,730 | \$ 3,820 | \$ 1,605 | |
| 1" | 5,460 | 7,640 | 3,210 | |
| 1-1/4" | 8,190 | 11,460 | 6,420 | |
| 1-1/2" | 10,920 | 15,280 | 8,025 | |
| 2" | 21,840 | 30,560 | 17,655 | |
| 3" | 49,140 | 68,760 | 43,335 | |
| 4" | 98,280 | 137,520 | 83,460 | |
| 6" | 256,620 | 359,080 | 215,070 | |
| 8" | 546,000 | 764,000 | 420,510 | |
| 10" | 982,800 | 1,375,200 | 698,175 | |
| 12" | 1,638,000 | 2,292,000 | 1,072,140 | |
| | | | | |

Applicability

The System Development Charge applies to any applicant for a license to take water through the Denver system or a system deriving its supply from Denver. This charge is assessed upon application for a new tap and is based upon the size of connection required.

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CUSTOMER SERVICE DATA: 1988 - 1997

| | 1997 | 1996 | 1995 | 1994 | 1993 | 1992 | 1991 | 1990 | 1989 | 1988 |
|---|-----------|----------------------|---------|---------|------------|---------|---------|----------|---------|---------------------|
| Active Taps: ¹ | | | | | | | | | | |
| Beginning of Year | 268,676 | 265,820 ⁶ | 268,506 | 265,233 | 262,184 | 259,695 | 258,096 | 256,587 | 255,559 | 254,330 |
| Activated During Year | 2,825 | 3,013 | 3,807 | 3,449 | 3,254 | 2,740 | 1,905 | 1,796 | 1,237 | 1,513 |
| Discontinued During Year | (163) | (157) | (314) | (176) | (205) | (251) | (306) | (287) | (209) | (284) |
| Net Increase During Year | 2,662 | 2,856 | 3,493 | 3,273 | 3,049 | 2,489 | 1,599 | 1,509 | 1,028 | 1,229 |
| Total Active Taps - End of Year | 271,338 | 268,676 | 271,999 | 268,506 | 265,233 | 262,184 | 259,695 | 258,096 | 256,587 | 255,559 |
| Services Behind Master Meters | 63,449 | 62,713 6 | 68,066 | 66,132 | 65,048 | 63,335 | 62,118 | 60,990 2 | 60,386 | 59,745 |
| Active Flat Rate Taps, End of Year ¹ | - | - | - | - | - | - | 22,243 | 47,391 | 61,130 | 71,688 |
| Active Meters (excludes customers | | | | | | | | | | |
| Behind Master Meters) ¹ | | | | | | | | | | |
| Inside City | 142,169 7 | 141,248 | 140,497 | 140,028 | 139,185 | 138,979 | 116,570 | 91,306 | 77,555 | 67,301 |
| Read and Bill | 34,638 | 33,791 | 32,827 | 32,142 | 31,030 | 30,285 | 29,511 | 29,329 | 28,730 | 28,184 ³ |
| Total Service | 29,892 | 29,425 | 29,090 | 28,756 | 28,289 | 27,992 | 27,714 | 27,571 | 27,311 | 27,206 |
| City and County | 1,018 | 1,020 | 1,023 | 1,072 | 979 | 940 | 895 | 876 | 845 | 821 |
| Monthly | 172 | 479 | 496 | 376 | 702 | 653 | 644 | 633 | 630 | 614 |
| Total Active Meters | 207,889 | 205,963 | 203,933 | 202,374 | 200,185 | 198,849 | 175,334 | 149,715 | 135,071 | 124,126 |
| Total Active Taps - End of Year | 271,338 | 268,676 | 271,999 | 268,506 | 265,233 | 262,184 | 259,695 | 258,096 | 256,587 | 255,559 |
| | | | | | · <u> </u> | | | | | |
| Stub-Ins on System ⁴ | 1,895 | 2,422 | 2,215 | 2,825 | 2,120 | 1,519 | 1,171 | 732 | 981 | 1,797 |
| Fire Hydrant Use Permits | 999 | 918 | 849 | 930 | 721 | 509 | 437 | 317 | 350 | 540 |
| Meters Replaced by Denver Water | 4,446 | 8,292 | 6,831 | 9,768 | 5,350 | 2,774 | 2,290 | 2,106 | 2,545 | 2,480 |
| Turn-Offs Due to Delinquent Accounts | 8,650 | 9,317 | 9,329 | 5,907 | 6,218 | 6,212 | 5,304 | 7,146 | 7,497 | 7,903 |
| Flat Rate Account Inspections | - | - | - | - | - | - | - | 1 | - | - |
| In-Home Water Audits | 1,637 | 1,343 | 1,403 | 1,501 | 2,147 | 1,857 | 1,991 | 536 | 714 | 836 |
| Universal Metering Program: | | | | | | | | | | |
| Flat Rate to Meter Conversion | - | - | - | - | - | 20,346 | 26,079 | 14,362 | 10,477 | 9,896 |
| Number of Service Lines Repaired | - | - | - | - | - | 142 | 119 | 106 | 63 | 85 |
| Feet of Service Lines Repaired/Replaced | - | - | - | - | - | 4,319 | 3,551 | 2,274 | 1,617 | 2,775 |
| Water Conservation Calls ⁵ | - | - | - | - | 213 | 223 | 456 | 1,174 | 1,605 | - |
| Water Conservation Field Stops ⁵ | 48 | 66 | 75 | 115 | 513 | 792 | 1,367 | 1,053 | 1,837 | 239 |
| Water Use Violations Issued ⁵ | - | - | - | - | - | 11 | 2 | 8 | 26 | - |

¹Service is on or has not been off for 5 consecutive years. Does not include taps sold to raw water distributors.

²Does not include Panorama Park Water Association, which converted to a Total Service Contract during 1986.

³One hundred sixty-three accounts in the Cedar Crest Read and Bill district transferred to Lakewood Master Meter.

⁴Stub-Ins are a connection made solely to extend the service line from the main to the valve at the property line prior to the paving of the street and are not considered a tap.

⁵The summer Water Conservation Program has been voluntary since 1983. In 1994 and 1995, conservation calls were not recorded.

⁶Broomfield Taps (6,179), removed from Master Meter counts.

⁷Beginning in 1997, large meters for wholesale distributors excluded from count, consistent with "Analysis of Customer Accounts for Treated Water

ANALYSIS OF CUSTOMER ACCOUNTS FOR TREATED WATER - 1997^1

| | | , | Total Accoun | ts | On Accounts | |
|---|-----------------------|------------------|------------------|------------------------|-------------|----------|
| | | 12-31-97 | 12-31-96 | Increase (Decrease) | 12-31-97 | 12-31-96 |
| METERED GENERAL CUSTOM | MERS | | | | | |
| Residential - | Denver | 118,787 | 117,977 | 810 | 117,783 | 116,994 |
| | Outside City | 31,852 | 31,102 | 750 | 31,793 | 31,058 |
| | Total Service | 27,124 | 26,752 | 372 | 27,059 | 26,690 |
| Small multi-family - | Denver | 7,938 | 7,868 | 70 | 7,861 | 7,784 |
| Ž | Outside City | 270 | 220 | 50 | 270 | 220 |
| | Total Service | 368 | 281 | 87 | 368 | 281 |
| Commercial - | Denver | 14,942 | 14,970 | (28) | 14,112 | 14,109 |
| | Outside City | 2,444 | 2,397 | 47 | 2,405 | 2,355 |
| | Total Service | 2,255 | 2,248 | 7 | 2,202 | 2,190 |
| Industrial - | Denver | 285 | 285 | _ | 249 | 250 |
| 110400141 | Outside City | 8 | 8 | _ | 8 | 8 |
| | Total Service | 11 | 13 | (2) | 10 | 11 |
| TOTAL METERED GENERAL | CUSTOMERS | 206,284 | 204,121 | 2,163 | 204,120 | 201,950 |
| PUBLIC AUTHORITIES | | | | | | |
| City & County of Denver | | 1,114 | 1,125 | (11) | 982 | 994 |
| Other County Agencies - | Denver | 175 | 171 | 4 | 156 | 154 |
| | Outside City | 51 | 51 | - | 47 | 47 |
| | Total Service | 124 | 121 | 3 | 113 | 112 |
| State Agencies - | Denver | 67 | 67 | - | 57 | 57 |
| | Outside City | 1 | 1 | - | 1 | 1 |
| | Total Service | 7 | 7 | - | 5 | 5 |
| Federal Agencies - | Denver | 51 | 48 | 3 | 44 | 44 |
| 8 | Outside City | 12 | 12 | _ | 10 | 10 |
| | Total Service | 3 | 3 | | 3 | 3 |
| TOTAL PUBLIC AUTHORITIES | S | 1,605 | 1,606 | (1) | 1,418 | 1,427 |
| RESALE ACCOUNTS (MASTE | R METER) ² | 63,449 | 62,713 | 736 | 63,449 | 62,713 |
| TOTAL TREATED WATER CU | STOMERS | 271,338 | 268,440 | 2,898 | 268,987 | 266,090 |
| | | | | | | |
| Summary (For SEC Disclosure Re | equirements) | 1.42.250 | 140.511 | | | |
| City Treated Water Contract Area: | | 143,359 | 142,511 | | | |
| Master Meter (Resale Accoun | its) | 63,449 | 62,713 | | | |
| Total Service | | 29,892 | 29,425 | | | |
| Read & Bill (Outside City) | | 34,638 | 33,791 | | | |
| Total Treated Water C | ustomers | 271,338 | 268,440 | | | |
| Raw Water Contract Area ³ City of Arvada | 10.5 | 30,081 | 29,484 | | | |
| North Table Mountain Water District | and Sanitation | 2 626 | 2 500 | | | |
| Total Customer Accou | nts | 2,636 304,055 | 2,580 300,504 | | | |
| | | | | | | |

¹ Represents number of metered services at year-end. For average number of customers billed during the calendar year, see "Operating Revenue and Related Water Consumption."

² See "Analysis of Sales of Treated Water for Resale."

³The number of accounts were provided by the City of Arvada and the North Table Mountain Water and Sanitation District.

OPERATING REVENUE AND RELATED WATER CONSUMPTION - 1997 (NON-ACCRUAL BASIS) $^{\rm l}$

| | | | Revenue | Consumption (000 Gallons) | Average Number of Customers | Revenue Per 1,000 Gallons |
|----|------------------------|------------------------------|--------------|---------------------------|-----------------------------------|---------------------------------|
| I. | SALES OF TREATED WA | <u>TER</u> | | | | |
| | A. METERED GENERAL | CUSTOMERS | | | | |
| | Residential - | Denver | \$24,787,546 | 15,322,525 | 117,283 | \$ 1.6177 |
| | | Outside City | 11,099,563 | 5,630,157 | 31,342 | 1.9714 |
| | | Total Service | 11,737,956 | 4,720,130 | 26,804 | 2.4868 |
| | Small multi-family- | Denver | 2,387,118 | 1,757,106 | 7,820 | 1.3586 |
| | | Outside City | 129,066 | 68,336 | 236 | 1.8887 |
| | | Total Service | 183,416 | 84,819 | 318 | 2.1624 |
| | Commercial - | Denver | 16,938,925 | 14,179,274 | 14,003 | 1.1946 |
| | | Outside City | 5,221,108 | 3,132,917 | 2,363 | 1.6665 |
| | | Total Service | 4,153,338 | 2,045,377 | 2,194 | 2.0306 |
| | Industrial - | Denver | 1,413,410 | 1,207,824 | 245 | 1.1702 |
| | | Outside City | 1,300,964 | 793,002 | 8 | 1.6406 |
| | | Total Service | 184,980 | 92,037 | 10 | 2.0098 |
| | Construction - | Denver | 61,352 | 7,372 | - | 8.3223 |
| | | Outside City | 25,445 | 12,797 | - | 1.9884 |
| | | Total Service | 19,824 | 1,951 | | 10.1609 |
| | | | 79,644,011 | 49,055,624 | 202,626 | 1.6235 |
| | B. PRIVATE FIRE PROT | ECTION SERVICE | | | | |
| | Sprinklers - | Denver | 441,340 | - 2 | | |
| | 1 | Outside City | 31,386 | - 2 | | |
| | | Total Service | 28,124 | - 2 | | |
| | | | 500,850 | 2 | | |
| | C. OTHER SALES TO PU | IRLIC ALITHORITIES | | | | |
| | City & County of Denve | | 3,048,469 | 3,063,296 | 980 | 0.9952 |
| | Other County Agencies | | 484,297 | 413,224 | 156 | 1.1720 |
| | other county rigencies | Outside City | 289,475 | 175,589 | 47 | 1.6486 |
| | | Total Service | 542,674 | 269,604 | 111 | 2.0129 |
| | State Agencies - | Denver | 246,687 | 211,136 | 57 | 1.1684 |
| | State rigencies | Outside City | 6,189 | 3,755 | 1 | 1.6483 |
| | | Total Service | 10,473 | 5,156 | 5 | 2.0313 |
| | Federal Agencies - | Denver | 469,658 | 393,540 | 22 | 1.1934 |
| | 1 000101 1 150110100 | Outside City at Denver Rates | 284,425 | 242,505 | 2 | 1.1729 |
| | | Outside City | 273,743 | 166,707 | 6 | 1.6421 |
| | | Total Service | 1,053 | 480 | 3 | 2.1938 |
| | | × ~ · · · · · | \$ 5,657,143 | 4,944,992 | 1,390 | \$ 1.1440 |

¹This schedule represents actual billings made for water during the year. No accruals were made for revenue earned on unbilled metered accounts. Therefore, amounts on this schedule do not agree with amounts on the Statement of Revenues, Expenses and Changes in Retained Earnings. The difference from amounts on an accrual basis is immaterial.

² Consumption is considered as part of unaccounted-for treated water. See "Analysis of Sales of Treated Water between Denver and Outside City" for this estimate.

OPERATING REVENUE AND RELATED WATER CONSUMPTION (Continued) - 1997 (NON-ACCRUAL BASIS)

| | | Revenue | Consumption (000 Gallons) | Average Number of Customers | Revenue Per 1,000 Gallons |
|-----|---|--|---------------------------|-----------------------------------|---------------------------------|
| I. | SALES OF TREATED WATER (Continued) D. SALES OF TREATED WATER FOR RESALE ¹ | \$ 26,474,222 | 16,051,176 | 63,449 | \$ 1.6494 |
| | E. WATER SUPPLIED FOR ARAPAHOE AQUIFER RECHARGE RESEARCH PROJECT (temporary lease with Willows Water) | <u> </u> | 28 | 1_ | |
| | TOTAL SALES OF TREATED WATER ² | 112,276,226 | 70,051,820 | 267,466 | 1.6028 |
| II. | SALES OF NON-POTABLE WATER ³ | 3,528,883 | 7,269,489 | 25 | 0.4854 |
| | TOTAL SALES OF WATER | 115,805,109 | 77,321,309 | 267,491 | \$ 1.4977 |
| Ш | OTHER NON-POTABLE WATER DELIVERIES ³ | | 3,153,088 | | |
| | TOTAL CONSUMPTION | | 80,474,397 | | |
| IV | A. POWER SALES REVENUE Foothills Treatment Plant | 206,719 | | | |
| | Strontia Springs Dillon Dam Roberts Tunnel | 251,476 507,326 69,185 | | | |
| | Hillcrest Williams Fork | 157,318 353,960 1,545,984 | | | |
| | B. SPECIAL ASSESSMENTS Late Payment Penalties Conservation Penalties Field Collection Charges Turnoff - Turn on Charges | 1,463,572 27,829 490,168 115,425 2,096,994 | | | |
| | TOTAL OTHER OPERATING REVENUE | 3,642,978 | | | |
| | TOTAL OPERATING REVENUE | \$119,448,087 | | | |

¹See "Analysis of Sales of Treated Water for Resale."

²See "Analysis of Sales of Treated Water Between Denver and Outside City."

³See "Analysis of Sales of Non-Potable Water Between Denver and Outside City."

ANALYSIS OF SALES OF TREATED WATER BETWEEN DENVER AND OUTSIDE CITY - 1997 (NON-ACCRUAL BASIS) $^{\rm l}$

| I. DENVER Amount Percent of Total Amount (000 Gallons) Percent of Total Number of Customers I. DENVER A. METERED GENERAL CUSTOMERS 824,787,546 22.08% 15,322,525 21.87% 117,283 Small multi-family 2,387,118 2.13% 1,757,106 2.51% 7,820 Commercial 16,938,925 15.09% 14,179,274 20.24% 14,003 Industrial 1,413,410 1.26% 1,207,824 1.72% 245 Construction 61,352 0.05% 7,372 0.01% - 45,588,351 40,61% 32,474,101 46,35% 139,351 | | Reveni | Revenue Consumption | | Consumption | |
|---|---------------------------------------|---------------------|---------------------|---------------|-------------|-----------|
| I. DENVER A. METERED GENERAL CUSTOMERS Residential \$24,787,546 22.08% 15,322,525 21.87% 117,283 Small multi-family 2,387,118 2.13% 1,757,106 2.51% 7,820 Commercial 16,938,925 15.09% 14,179,274 20.24% 14,003 Industrial 1,413,410 1.26% 1,207,824 1.72% 245 Construction 61,352 0.05% 7,372 0.01% - | | | Percent | Amount | Percent | Number of |
| A. METERED GENERAL CUSTOMERS \$24,787,546 \$22.08% \$15,322,525 \$21.87% \$117,283 Small multi-family 2,387,118 2.13% 1,757,106 2.51% 7,820 Commercial 16,938,925 15.09% 14,179,274 20.24% 14,003 Industrial 1,413,410 1.26% 1,207,824 1.72% 245 Construction 61,352 0.05% 7,372 0.01% - | | Amount | of Total | (000 Gallons) | of Total | Customers |
| A. METERED GENERAL CUSTOMERS \$24,787,546 \$22.08% \$15,322,525 \$21.87% \$117,283 Small multi-family 2,387,118 2.13% 1,757,106 2.51% 7,820 Commercial 16,938,925 15.09% 14,179,274 20.24% 14,003 Industrial 1,413,410 1.26% 1,207,824 1.72% 245 Construction 61,352 0.05% 7,372 0.01% - | I DENUED | | | | | |
| Residential \$24,787,546 22.08% 15,322,525 21.87% 117,283 Small multi-family 2,387,118 2.13% 1,757,106 2.51% 7,820 Commercial 16,938,925 15.09% 14,179,274 20.24% 14,003 Industrial 1,413,410 1.26% 1,207,824 1.72% 245 Construction 61,352 0.05% 7,372 0.01% - | · · · · · · · · · · · · · · · · · · · | | | | | |
| Small multi-family 2,387,118 2.13% 1,757,106 2.51% 7,820 Commercial 16,938,925 15.09% 14,179,274 20.24% 14,003 Industrial 1,413,410 1.26% 1,207,824 1.72% 245 Construction 61,352 0.05% 7,372 0.01% - | | #24.505.54 6 | 22 000/ | 15 222 525 | 21.050/ | 117.000 |
| Commercial 16,938,925 15.09% 14,179,274 20.24% 14,003 Industrial 1,413,410 1.26% 1,207,824 1.72% 245 Construction 61,352 0.05% 7,372 0.01% - | | | | | | |
| Industrial 1,413,410 1.26% 1,207,824 1.72% 245 Construction 61,352 0.05% 7,372 0.01% - | · · · · · · · · · · · · · · · · · · · | | | | | |
| Construction 61,352 0.05% 7,372 0.01% - | | | | | | |
| | | | | | | |
| 45 588 351 40 61% 32 474 101 46 35% 130 351 | Construction | | | | | |
| 45,366,351 40.01% 32,474,101 40.35% 137,351 | | 45,588,351 | 40.61% | 32,474,101 | 46.35% | 139,351 |
| B. PRIVATE FIRE PROTECTION SERVICE | B. PRIVATE FIRE PROTECTION SERVICE | | | | | |
| Sprinklers 441,340 0.39% - ² | | 441,340 | 0.39% | _ 2 | | |
| <u> </u> | 1 | | | | | |
| C. OTHER SALES TO PUBLIC AUTHORITIES | | | | | | |
| City And County of Denver 3,048,469 2.72% 3,063,296 4.37% 980 | · | 3,048,469 | 2.72% | 3,063,296 | 4.37% | 980 |
| Other County Agencies 484,297 0.43% 413,224 0.59% 156 | Other County Agencies | 484,297 | 0.43% | 413,224 | 0.59% | 156 |
| State Agencies 246,687 0.22% 211,136 0.30% 57 | State Agencies | 246,687 | 0.22% | 211,136 | 0.30% | 57 |
| Federal Agencies 469,658 0.42% 393,540 0.56% 22 | Federal Agencies | 469,658 | 0.42% | 393,540 | 0.56% | 22 |
| 4,249,111 3.79% 4,081,196 5.82% 1,215 | | 4,249,111 | 3.79% | 4,081,196 | 5.82% | 1,215 |
| | TOTAL GALEGOE TREATER WATER | | | | | |
| TOTAL SALES OF TREATED WATER - | | 50.250.002 | 4.4.5007 | 24.555.205 | 50 150/ | 1.10.766 |
| DENVER 50,278,802 44.79% 36,555,297 52.17% 140,566 | DENVER | 50,278,802 | 44.79% | 36,555,297 | 52.17% | 140,566 |
| Revenue per 1,000 Gallons - Denver \$1.3754 | Revenue per 1 000 Gallons - Denver | | | \$1 3754 | | |
| Tevendo per 1,000 Ganons Benver | revenue per 1,000 cunons Benver | | | Ψ1.373. | | |
| | | | | | | |
| II. OUTSIDE CITY | | | | | | |
| A. METERED GENERAL CUSTOMERS | | | | | | |
| Residential 11,099,563 9.89% 5,630,157 8.04% 31,342 | | | 9.89% | 5,630,157 | 8.04% | 31,342 |
| Small multi-family 129,066 0.11% 68,336 0.10% 236 | Small multi-family | | 0.11% | / | 0.10% | 236 |
| Commercial 5,221,108 4.65% 3,132,917 4.47% 2,363 | | | 4.65% | | 4.47% | 2,363 |
| Industrial 1,300,964 1.16% 793,002 1.13% 8 | Industrial | | 1.16% | | 1.13% | 8 |
| Construction 25,445 0.02% 12,797 0.02% - | Construction | 25,445 | 0.02% | 12,797 | 0.02% | - |
| Residential - Total Service 11,737,956 10.45% 4,720,130 6.74% 26,804 | | | 10.45% | | 6.74% | 26,804 |
| Small multi-family - Total Service 183,416 0.16% 84,819 0.12% 318 | Small multi-family - Total Service | | 0.16% | | 0.12% | |
| Commercial - Total Service 4,153,338 3.70% 2,045,377 2.92% 2,194 | Commercial - Total Service | 4,153,338 | 3.70% | 2,045,377 | 2.92% | 2,194 |
| Industrial - Total Service 184,980 0.16% 92,037 0.13% 10 | Industrial - Total Service | 184,980 | 0.16% | 92,037 | 0.13% | 10 |
| Construction - Total Service 19,824 0.02% 1,951 - % - | Construction - Total Service | 19,824 | 0.02% | | - % | |
| \$34,055,660 30.32% 16,581,523 23.67% 63,275 | | \$34,055,660 | 30.32% | 16,581,523 | 23.67% | 63,275 |

¹This schedule represents actual billings made for water during the year. No accruals were made for revenue earned on unbilled accounts. Therefore, amounts on this schedule do not agree with amounts on the Statement of Revenues, Expenses, and Changes in Retained Earnings. The difference from amounts on an accrual basis is immaterial.

PAGE C-54 (Continued next page)

²Consumption is considered as part of unaccounted-for treated water.

ANALYSIS OF SALES OF TREATED WATER BETWEEN DENVER AND OUTSIDE CITY - 1997 (NON-ACCRUAL BASIS) (Continued)

| | Reven | iue | Consum | Consumption | |
|---|----------------|----------|---------------|-------------|----------------------|
| | | Percent | Amount | Percent | Average Number of |
| | Amount | of Total | (000 Gallons) | of Total | Customers |
| II. OUTSIDE CITY (Continued) | | | | | |
| B. PRIVATE FIRE PROTECTION SERVICE | | | | | |
| Sprinklers | \$ 31,386 | 0.03% | 1 | | |
| Sprinklers - Total Service | 28,124 | 0.03% | _ 1 | | |
| Sprinkers - Total Service | 59,510 | 0.06% | | | |
| | | | | | |
| C. OTHER SALES TO PUBLIC AUTHORITIES | | | .= | | |
| County Agencies | 289,475 | 0.26% | 175,589 | 0.25% | 47 |
| State Agencies | 6,189 | 0.01% | 3,755 | 0.01% | 1 |
| Federal Agencies | 273,743 | 0.24% | 166,707 | 0.24% | 6 |
| Federal Agencies at Denver Rates | 284,425 | 0.25% | 242,505 | 0.35% | 2 |
| County Agencies - Total Service | 542,674 | 0.48% | 269,604 | 0.38% | 111 |
| State Agencies - Total Service | 10,473 | 0.01% | 5,156 | 0.01% | 5 |
| Federal Agencies - Total Service | 1,053 | - % | 480 | - % | 3 |
| | 1,408,032 | 1.25% | 863,796 | 1.24% | 175 |
| D. SALES OF TREATED WATER FOR RESALF $\!\!^2$ | 26,474,222 | 23.58% | 16,051,176 | 22.92% | 63,449 |
| E. WATER SUPPLIED FOR ARAPAHOE | | | | | |
| AQUIFER RECHARGE RESEARCH PROJECT | | | | | |
| (temporary lease with Willows Water) | | - % | 28 | - % | 1 |
| (temporary lease with willows water) | | - 70 | | - 70 | 1 |
| TOTAL SALES OF TREATED WATER - | | | | | |
| OUTSIDE CITY | 61,997,424 | 55.21% | 33,496,523 | 47.83% | 126,900 |
| | | | | | |
| Revenue per 1,000 Gallons - Outside City | | | \$1.8509 | | |
| | | | | | |
| TOTAL SALES OF TREATED WATER | \$ 112,276,226 | 100.00% | 70,051,820 | 100.00% | 267,466 |
| D | | | ¢1 (020 | | |
| Revenue per 1,000 Gallons - Total | | | \$1.6028 | | |
| | | | | | |
| UNACCOUNTED FOR WATER | | | | | |
| Total Treated Water Delivered | | | 75,363,330 | | |
| Water Purchased | | | | | |
| Total Treated Water Available | | | 75,363,330 | 100.00% | |
| Less Sales of Treated Water | | | 70,051,820 | (92.95%) | |
| Unaccounted for | | | 5,311,510 | 7.05% | |

¹Consumption is considered as part of unaccounted-for treated wate ²See "Analysis of Sales of Treated Water For Resale."

³Includes meter slippage, main and service line leakage, public and private fire protection, and other system losses

ANALYSIS OF SALES OF TREATED WATER FOR RESALE - 1997 (NON-ACCRUAL BASIS) $^{\rm l}$

 $Treated\ Water\ Sold\ Outside\ Denver\ to\ Municipalities\ and\ Distributors\ through\ Master\ Meters^2$

| | Revenue | Consumption (000 Gallons) | Estimated Number of Taps ³ |
|---|---------------|---------------------------|---|
| Alameda Water & Sanitation District | \$ 193,655 | 117,366 | 315 |
| Bancroft-Clover Water & Sanitation District | 2,910,678 | 1,764,047 | 8,173 |
| Bonvue Water & Sanitation District | 27,604 | 16,730 | 166 |
| Bow-Mar Water & Sanitation District | 146,475 | 88,773 | 282 |
| Cherry Creek Valley Water & Sanitation District | 1,138,646 | 690,178 | 1,150 |
| Cherry Creek Village Water & Sanitation District | 263,771 | 159,861 | 468 |
| Cherrymoor South Water & Sanitation District | 81,214 | 49,213 | 95 |
| Consolidated Mutual Water Company | 5,333,346 | 3,237,716 | 14,384 |
| Crestview Water & Sanitation District | 1,242,579 | 753,078 | 4,375 |
| City of Edgewater | 425,695 | 257,997 | 1,420 |
| City of Glendale | 581,204 | 352,245 | 262 |
| Green Mountain Water & Sanitation District | 3,195,354 | 1,936,578 | 9,690 |
| High View Water District | 269,253 | 163,184 | 826 |
| Ken-Caryl Water & Sanitation District | 1,449,649 | 878,575 | 3,531 |
| Lakehurst Water & Sanitation District | 1,278,994 | 775,148 | 3,983 |
| City of Lakewood | 415,232 | 251,656 | 831 |
| Meadowbrook Water & Sanitation District | 276,933 | 167,838 | 915 |
| North Pecos Water & Sanitation District | 242,499 | 146,969 | 340 |
| North Washington Street Water & Sanitation District | 1,484,592 | 899,753 | 2,998 |
| Northgate Water District | 9,423 | 5,711 | 2 |
| South Adams County Water & Sanitation District | 171,347 | 103,847 | 149 |
| Valley Water District | 830,927 | 503,585 | 1,276 |
| Wheat Ridge Water District | 1,598,979 | 969,078 | 5,151 |
| Willowbrook Water & Sanitation District | 742,396 | 449,937 | 2,667 |
| Willows Water District | 565,186 | 342,537 | - 4 |
| Total Sales for Master Meter Distributors | 24,875,631 | 15,081,600 | 63,449 |
| City of Broomfield ⁵ | 1,424,161 | 863,861 | |
| Inverness Water District | 174,430 | 105,715 | |
| Total Sales for Other Contracts at Wholesale Rates | 1,598,591 | 969,576 | |
| Total Sales of Treated Water for Resale | \$ 26,474,222 | 16,051,176 | 63,449 |

¹This schedule represents actual billings made for water during the year. The difference from amounts on an accrual basis is immaterial.

²Sales on Total Service or Read and Bill Contracts are not included.

³Estimated number of taps served behind Master Meters is based on survey analysis.

⁴Tap information is not currently available.

⁵As of 1996, taps for City of Broomfield are no longer included.

ANALYSIS OF SALES OF NON-POTABLE WATER BETWEEN DENVER AND OUTSIDE CITY - 1997 (NON-ACCRUAL BASIS) $^{\rm I}$

| DENVER | | Reven | iue | Consump | otion | Average | Revenue |
|---|--|-------------|----------|---------------|----------|------------------------|-----------|
| Name | | | | | | Number of | Per 1,000 |
| Raw Water Sales 1 2,2327 3.46% 202,781 2.79% 1 \$ 0.070 Public Service Company of Colorado 111,800 3.17% 23,7872 3.27% 1 0.4700 All Other 8,852 0.29% 18,835 0.26% 6.32% 4 0.5288 Effluent Sales 242,979 6.88% 459,488 6.32% 4 0.5288 All Other 306 0.01% 5.279 0.07% 5 0.1737 Milnimum Contract Payments ² 306 0.01% 464,767 6.39% 5 0.29% COUTSIDE CITY, WITHIN COMBINED SERVICE AREA All Other 9,466 0.27% 94,473 1.30% 5 0.296 Effluent Sales 4 117,827 0.50% 0.2 0.2000 0.000 Effluent Sales 1 17,827 0.50% 0.2 0.2 0.000 Effluent Sales 1 1,829 0.014% 0.2 0.2 0.000 Effluent | | Amount | of Total | (000 Gallons) | of Total | Customers ³ | Gallons |
| City & County Agencies \$12,327 3.46% 20.2781 2.79% 1 \$0.0032 Public Service Company of Colorado 111.800 3.17% 237,875 3.27% 1 0.4700 1.00000 1.00000 1.00000 1.00000 1.00000 1.00000 1.00000 1.000000 1.0000000000 | | | | | | | |
| Public Service Company of Colorado | | | 2.4504 | 202 504 | 2.500/ | | A 0 5022 |
| All Other | | | | | | | |
| Effhent Sales All Other All Other Contract Payments Sales All Other All Other Contract Payments Sales All Other All Other Sales All Other All | | | | | | | |
| Effluent Sales | All Other | | | | | | |
| All Other Minimum Contract Payments | Effluent Sales | 272,777 | 0.0070 | +57,400 | 0.3270 | | 0.5200 |
| Minimum Contract Payments | | 917 | 0.03% | 5,279 | 0.07% | - | 0.1737 |
| Total Dener | Minimum Contract Payments ² | | | | | | |
| Cutside Citry Within Combined Service Area Park Pa | All Other | 306 | 0.01% | | | 1 | |
| Raw Water Sales All other South So | Total Denver | 244,202 | 6.92% | 464,767 | 6.39% | 5 | 0.5254 |
| Raw Water Sales All other South So | | | | | | | |
| All other Effluent Sales All Other Araba All Other Araba Araba Araba Araba Araba Araba Araba Araba North Table Mountain Araba Araba Araba Araba Araba Araba Araba North Table Mountain All Other Araba Arab | | | | | | | |
| Effluent Sales All Other 5,214 0.15% 20,855 0.29% . 0,2500 Milnimum Contract Payments ² Glemnoor Country Club 17,827 0.50% . | | | | | | | |
| Minimum Contract Payments S.214 O.15% C.0.855 O.29% C. O.2500 | | 9,466 | 0.27% | 94,473 | 1.30% | 2 | 0.1002 |
| Minimum Contract Payments Glemnor Country Club | | 5 214 | 0.150/ | 20.955 | 0.200/ | | 0.2500 |
| Seminor Country Club | 2 | 5,214 | 0.15% | 20,855 | 0.29% | | 0.2500 |
| All Other | • | 17 827 | 0.50% | | | | |
| Total Outside City, Within Combined Service Area 22,336 0.64% 1 2 2 1 | | | | _ | _ | 2 | _ |
| Total Outside City, Within Combined Service Area 37,616 1.06% 115,328 1.59% 4 0.3262 | · m out | | | | | | |
| North Table Mountain 289,421 8.20% 590,655 8.12% 1 0.4900 | Total Outside City, Within Combined Service Area | | | 115,328 | 1.59% | | 0.3262 |
| Raw Water for Resale Arvada 2,208,666 62.59% 4,507,482 62.00% 1 0.4900 North Table Mountain 289,421 8.20% 590,655 8.12% 1 0.4900 Raw Water Sales Centennial Water & Sanitation District 282,507 8.01% 1,059,668 14.58% 1 0.2666 City of Englewood 81,482 2.31% 413,180 5.68% 1 0.1972 U.S. Department of Energy 48,343 1.37% 98,659 1.36% 1 0.4900 All other 16,411 0.47% 17,931 0.25% 5 0.9152 Effluent Sales 428,743 12.16% 1,589,438 21.87% 8 0.2697 Effluent Sales 4 428,743 12.16% 1,589,438 21.87% 8 0.2501 Effluent Sales 4 455 0.01% 1,819 0.03% - 0.2501 Minimum Contract Payments² 2 21,008 0.60% - - | • | | | | | | |
| North Table Mountain 289,421 8.20% 590,655 8.12% 1 0.4900 | · | | | | | | |
| Raw Water Sales | Arvada | 2,208,666 | 62.59% | 4,507,482 | 62.00% | 1 | 0.4900 |
| Raw Water Sales Centennial Water & Sanitation District 282,507 8.01% 1,059,668 14.58% 1 0.2666 City of Englewood 81,482 2.31% 413,180 5.68% 1 0.1972 U.S. Department of Energy 48,343 1.37% 98,659 1.36% 1 0.4900 All other 16,411 0.47% 17,931 0.25% 5 0.9152 Effluent Sales 428,743 12.16% 1,589,438 21.87% 8 0.2697 Effluent Sales 4 455 0.01% 1,819 0.03% - 0.2501 Minimum Contract Payments² 2 0.01% 1,819 0.03% - 0.2501 City of Westminster 21,008 0.60% - - 1 - - 0.2501 All other 3,350 0.09% - - 1 - - - 1 - - - - - - - - - - | North Table Mountain | 289,421 | 8.20% | 590,655 | 8.12% | 1 | 0.4900 |
| Centennial Water & Sanitation District 282,507 8.01% 1,059,668 14.58% 1 0.2666 City of Englewood 81,482 2.31% 413,180 5.68% 1 0.1972 U.S. Department of Energy 48,343 1.37% 98,659 1.36% 1 0.4900 All other 428,743 12.16% 1,589,438 21.87% 8 0.2697 Effluent Sales 428,743 12.16% 1,589,438 21.87% 8 0.2697 Effluent Sales All other 455 0.01% 1,819 0.03% - 0.2501 | | 2,498,087 | 70.79% | 5,098,137 | 70.12% | 2 | 0.4900 |
| City of Englewood 81,482 2.31% 413,180 5.68% 1 0.1972 U.S. Department of Energy 48,343 1.37% 98,659 1.36% 1 0.4900 All other 16,411 0.47% 17,931 0.25% 5 0.9152 Effluent Sales 12,16% 1,589,438 21.87% 8 0.2697 All other 455 0.01% 1,819 0.03% - 0.2501 Minimum Contract Payments² Colorado Division of Parks 21,008 0.60% - - 1 - City of Westminster 279,422 7.92% - - 1 - City of Westminster 33,50 0.09% - - 1 - Cinsolidated Mutual 16,000 0.45% - - 6 - All other 3,350 0.09% - - - 6 - Total Outside Combined Service Area 3,247,065 92,02% 6,689,394 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | | | |
| U.S. Department of Energy All other 16,411 0.47% 11,931 0.25% 5 0.9152 5 0.9152 6 1,589,438 21.87% 8 0.2697 Effluent Sales All other 4428,743 12.16% 1,589,438 21.87% 8 0.2697 Effluent Sales All other 455 0.01% 1,819 0.03% - 0.2501 Minimum Contract Payments² Colorado Division of Parks 21,008 City of Westminster 279,422 7,92% 1 Consolidated Mutual 16,000 0.45% 1 1 0.2501 All other 3,3350 0.09% 1 1 0.2501 Total Outside Combined Service Area 3,247,065 92.02% 6,689,394 92.02% 16 0.4854 OTHER NON-POTABLE WATER DELIVERIES Public Service Co. (Cherokee Plant - Farmers & Gardeners Ditch) City of Englewood (Cabin-Meadow Exchange) City of Englewood (Cabin-Meadow Exchange) Church Lake (from Long Lakes) TOTAL OTHER NON-POTABLE WATER DELIVERIES PICTAL OTHER NON-POTABLE WATER DELIVERIES Church Lake (from Long Lakes) TOTAL OTHER NON-POTABLE WATER DELIVERIES S, 1,53,088 | | | | | | | |
| All other 16,411 0.47% 17,931 0.25% 5 0.9152 428,743 12.16% 1,589,438 21.87% 8 0.2697 Effluent Sales | · · · | | | | | | |
| Effluent Sales 428,743 12.16% 1,589,438 21.87% 8 0.2697 All other 455 0.01% 1,819 0.03% - 0.2501 Minimum Contract Payments² Colorado Division of Parks 21,008 0.60% - - 1 - City of Westminster 279,422 7.92% - - 1 - Consolidated Mutual 16,000 0.45% - - 1 - All other 3,350 0.09% - - 3 - All other 3,350 0.09% - - 6 - Total Outside Combined Service Area 3,247,065 92.02% 6,689,394 92.02% 16 0.4854 TOTAL SALES OF NON-POTABLE WATER DELIVERIES Public Service Co. (Cherokee Plant - Farmers & Gardeners Ditch) 1,308,614 1,012,742 1,012,742 1,012,742 1,012,742 1,012,742 1,012,742 1,012,742 1,012,742 1,012,742 1,012,742 | · ** | | | | | | |
| Effluent Sales All other 455 0.01% 1,819 0.03% - 0.2501 Minimum Contract Payments 2 Colorado Division of Parks 21,008 0.60% - - 1 - City of Westminster 279,422 7.92% - - 1 - Consolidated Mutual 16,000 0.45% - - 1 - All other 3,350 0.09% - - 3 - All other 3,350 0.09% - - 6 - Total Outside Combined Service Area 3,247,065 92.02% 6,689,394 92.02% 16 0.4854 TOTAL SALES OF NON-POTABLE WATER DELIVERIES \$3,528,883 100.00% 7,269,489 100.00% 25 \$ 0.4854 OTHER NON-POTABLE WATER DELIVERIES 1,308,614 1,012,742 1,012,742 1,012,742 1,012,742 1,012,742 1,012,742 1,012,742 1,012,742 1,012,742 1,012,742 1,012,742 1,012,742 1,012,742 1,012,742 | All other | | | | | | |
| Minimum Contract Payments Colorado Division of Parks 21,008 0.60% - - 1 - | Effluent Sales | 420,743 | 12.10% | 1,369,436 | 21.67% | | 0.2097 |
| Minimum Contract Payments Colorado Division of Parks 21,008 0.60% - - 1 - | | 455 | 0.01% | 1 819 | 0.03% | _ | 0.2501 |
| Colorado Division of Parks 21,008 0.60% - - 1 - City of Westminster 279,422 7.92% - - 1 - Consolidated Mutual 16,000 0.45% - - 1 - All other 3,350 0.09% - - - 3 - Total Outside Combined Service Area 3,247,065 92.02% 6,689,394 92.02% 16 0.4854 TOTAL SALES OF NON-POTABLE WATER \$3,528,883 100.00% 7,269,489 100.00% 25 \$ 0.4854 OTHER NON-POTABLE WATER DELIVERIES Public Service Co. (Cherokee Plant - Farmers & Gardeners Ditch) 1,308,614 1,012,742 1, | | 133 | 0.0170 | 1,017 | 0.0370 | - | 0.2301 |
| City of Westminster 279,422 7.92% - - 1 - Consolidated Mutual 16,000 0.45% - - 1 - All other 3,350 0.09% - - - 3 - Total Outside Combined Service Area 3,247,065 92.02% 6,689,394 92.02% 16 0.4854 TOTAL SALES OF NON-POTABLE WATER \$3,528,883 100.00% 7,269,489 100.00% 25 \$ 0.4854 OTHER NON-POTABLE WATER DELIVERIES Public Service Co. (Cherokee Plant - Farmers & Gardeners Ditch) 1,308,614 1,012,742 <td< td=""><td></td><td>21.008</td><td>0.60%</td><td></td><td></td><td>1</td><td></td></td<> | | 21.008 | 0.60% | | | 1 | |
| Consolidated Mutual 16,000 0.45% - - 1 - All other 3,350 0.09% - - 3 - Total Outside Combined Service Area 319,780 9.06% - - - 6 - Total Outside Combined Service Area 3,247,065 92.02% 6,689,394 92.02% 16 0.4854 TOTAL SALES OF NON-POTABLE WATER \$3,528,883 100.00% 7,269,489 100.00% 25 \$ 0.4854 OTHER NON-POTABLE WATER DELIVERIES Public Service Co. (Cherokee Plant - Farmers & Gardeners Ditch) 1,308,614 1,012,742< | | | | _ | _ | | - |
| All other 3,350 0.09% 3 3 - 319,780 9.06% 6 6 6 7 - 6 7 - 6 7 - 7 6 7 - 7 6 7 - 7 7 - 7 7 - 7 7 - 7 7 - 7 7 - 7 7 7 - 7 7 7 - 7 7 7 - 7 7 7 - 7 7 7 - 7 7 7 - 7 7 7 - 7 7 7 - 7 7 7 - 7 7 7 - 7 7 7 - 7 7 7 - 7 7 7 - 7 7 7 - 7 7 7 7 - 7 7 7 7 - 7 | • | | | <u>-</u> | _ | | _ |
| 319,780 9.06% - - 6 - 3,247,065 92.02% 6,689,394 92.02% 16 0.4854 TOTAL SALES OF NON-POTABLE WATER \$3,528,883 100.00% 7,269,489 100.00% 25 \$ 0.4854 OTHER NON-POTABLE WATER DELIVERIES Public Service Co. (Cherokee Plant - Farmers & Gardeners Ditch) 1,308,614 City Ditch at Washington Park 1,012,742 Fairmount Cemetery Augmentation Plan 815 City of Englewood (Cabin-Meadow Exchange) 765,748 Church Lake (from Long Lakes) 65,170 TOTAL OTHER NON-POTABLE WATER DELIVERIES 3,153,088 | | | | - | _ | | - |
| TOTAL SALES OF NON-POTABLE WATER \$3,528,883 100.00% 7,269,489 100.00% 25 \$ 0.4854 OTHER NON-POTABLE WATER DELIVERIES Public Service Co. (Cherokee Plant - Farmers & Gardeners Ditch) 1,308,614 1,012,742 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | | | |
| OTHER NON-POTABLE WATER DELIVERIES Public Service Co. (Cherokee Plant - Farmers & Gardeners Ditch) City Ditch at Washington Park Fairmount Cemetery Augmentation Plan City of Englewood (Cabin-Meadow Exchange) Church Lake (from Long Lakes) TOTAL OTHER NON-POTABLE WATER DELIVERIES 3,153,088 | Total Outside Combined Service Area | 3,247,065 | 92.02% | 6,689,394 | 92.02% | 16 | 0.4854 |
| Public Service Co. (Cherokee Plant - Farmers & Gardeners Ditch) 1,308,614 City Ditch at Washington Park 1,012,742 Fairmount Cemetery Augmentation Plan 815 City of Englewood (Cabin-Meadow Exchange) 765,748 Church Lake (from Long Lakes) 707AL OTHER NON-POTABLE WATER DELIVERIES 3,153,088 | TOTAL SALES OF NON-POTABLE WATER | \$3,528,883 | 100.00% | 7,269,489 | 100.00% | 25 | \$ 0.4854 |
| Public Service Co. (Cherokee Plant - Farmers & Gardeners Ditch) City Ditch at Washington Park Fairmount Cemetery Augmentation Plan City of Englewood (Cabin-Meadow Exchange) Church Lake (from Long Lakes) TOTAL OTHER NON-POTABLE WATER DELIVERIES 1,012,742 815 765,748 Church Chake (from Long Lakes) 3,153,088 | | | | | | | |
| Public Service Co. (Cherokee Plant - Farmers & Gardeners Ditch) City Ditch at Washington Park Fairmount Cemetery Augmentation Plan City of Englewood (Cabin-Meadow Exchange) Church Lake (from Long Lakes) TOTAL OTHER NON-POTABLE WATER DELIVERIES 1,012,742 815 765,748 Church Chake (from Long Lakes) 3,153,088 | | | | | | | |
| City Ditch at Washington Park Fairmount Cemetery Augmentation Plan City of Englewood (Cabin-Meadow Exchange) Church Lake (from Long Lakes) TOTAL OTHER NON-POTABLE WATER DELIVERIES 1,012,742 815 765,748 65,170 TOTAL OTHER NON-POTABLE WATER DELIVERIES 3,153,088 | OTHER NON-POTABLE WATER DELIVERIES | | | | | | |
| Fairmount Cemetery Augmentation Plan City of Englewood (Cabin-Meadow Exchange) Church Lake (from Long Lakes) TOTAL OTHER NON-POTABLE WATER DELIVERIES 3,153,088 | ` | Ditch) | | | | | |
| City of Englewood (Cabin-Meadow Exchange) 765,748 Church Lake (from Long Lakes) 65,170 TOTAL OTHER NON-POTABLE WATER DELIVERIES 3,153,088 | | | | | | | |
| Church Lake (from Long Lakes) 65,170 TOTAL OTHER NON-POTABLE WATER DELIVERIES 3,153,088 | | | | | | | |
| TOTAL OTHER NON-POTABLE WATER DELIVERIES 3,153,088 | | | | | | | |
| | Church Lake (from Long Lakes) | | | 65,170 | | | |
| TOTAL NON-POTABLE WATER DELIVERIES 10,422,577 | TOTAL OTHER NON-POTABLE WATER DELIVERIES | S | | 3,153,088 | | | |
| | TOTAL NON-POTABLE WATER DELIVERIES | | | 10,422,577 | | | |

¹This schedule represents actual billings made for water during the year. No accruals were made for revenue earned on unbilled metered accounts. The difference from amounts on an accrual basis is immaterial.

²Effective for 1997, non-potable sales have been identified as raw, effluent, and minimum contract payments. The minimum payment category reflects—contract-stipulated payments in excess of the revenue recorded for actual deliveries of non-potable water. Prior to 1997, this revenue was reported as—Special Assessments-Other on the "Operating Revenue and Related Water Consumption" schedule.

³If the customer is reflected in the count of raw water customers, it is excluded from the count of effluent and minimum contract payment customers.

25 LARGEST CUSTOMERS - WATER CONSUMPTION AND REVENUE - 1997 $(NON-ACCRUAL\ BASIS)^1$

| Account Name | Consumption (000 Gallons) | Water Revenue |
|--|---------------------------|------------------|
| Conoco, Inc. | 453,038 | \$ 730,900 |
| Denver Housing Authority | 408,978 | 480,254 |
| Lowry Redevelopment Authority ² | 386,957 | 463,713 |
| Public Service Company | 355,022 | 528,685 |
| Fitzsimons Army Medical Center ³ | 251,589 | 293,157 |
| Denver Federal Center | 172,252 | 274,044 |
| Martin Marietta | 156,550 | 259,019 |
| Windsor Gardens Association | 146,070 | 177,670 |
| Denver Marriott | 143,526 | 166,321 |
| Safeway Stores, Inc. | 138,535 | 172,829 |
| Pepsi-Cola Company | 135,555 | 158,201 |
| Gates Corporation | 127,721 | 151,374 |
| U.S. West Communications | 123,856 | 208,042 |
| University of Colorado Health Sciences Center | 123,290 | 147,493 |
| Ames Construction | 111,905 | 123,652 |
| Thermal Energy Manager | 106,373 | 123,432 |
| Presbyterian/St. Luke's Medical Center | 94,513 | 111,730 |
| Jefferson County Schools | 93,308 | 158,280 |
| King Soopers, Inc. | 89,989 | 121,508 |
| South Suburban Recreation | 87,078 | 158,522 |
| Coca Cola Bottling, Inc. | 80,629 | 94,107 |
| Cherry Creek Townhomes | 80,605 | 96,377 |
| Pine Creek Apartments | 77,632 | 90,115 |
| Willow Creek Home Owners Association | 74,526 | 126,680 |
| Devonshire Apartments | 71,653 | 83,149 |
| Total - 25 Largest Customers | 4,091,150 | \$ 5,499,255 |
| Total Sales of Treated Water | 70,051,820 | \$ 112,276,226 |
| Percent of 25 Largest Customers to Total Sales | | |
| of Treated Water | 5.8% | 4.9% |

¹This schedule represents actual billings made for water during the year. The difference from amounts on an accrual basis is immaterial. In addition to the accounts listed, Denver Water provided 3,063,296 (000 gallons) to the City and County of Denver. Revenues from these sales were \$3,048,469.

²Lowry Air Force Base closed on September 30, 1994. Many of the existing structures have been leased, and water consumption has increased from 1994 to 1997. As redevelopment of the site occurs, it is projected that water consumption will continue to increase beyond its historic levels. The water system is currently being upgraded by the Lowry Redevelopment Authority, and will be transferred to Denver Water in five years.

³Fitzsimons Army Medical Center is scheduled to close within the next few years. Since it is located within the legal boundaries of the City of Aurora, it is anticipated that water service on that site in the future will be provided by that city.

SYSTEM DEVELOPMENT CHARGES AND PARTICIPATION FEES: 1973 - 1997 (CASH BASIS - NET OF REFUNDS)

| | System | |
|---------|----------------------|---------------|
| | Development | Participation |
| | Charges ¹ | Receipts |
| 1007 | ¢ 45 050 104 | Ф. 2.722.524 |
| 1997 | \$ 45,058,104 | \$ 3,732,524 |
| 1996 | 15,137,300 | 2,913,100 |
| 1995 | 15,527,600 | 3,929,800 |
| 1994 | 13,535,700 | 2,881,800 |
| 1993 | 12,181,800 | 1,343,600 |
| 1992 | 10,920,300 | 1,198,800 |
| 1991 | 7,530,400 | 2,330,700 |
| 1990 | 6,615,100 | 1,838,700 |
| 1989 | 6,251,400 | 4,965,200 |
| 1988 | 6,084,600 | 3,067,700 |
| 1987 | 8,544,400 | 4,561,300 |
| 1973-86 | 149,473,600 | 43,647,100 |
| | \$296,860,304 | \$76,410,324 |

¹The System Development Charges receipts above are permitted to be used to retire debt.

RECEIPTS AND EXPENDITURES BUDGET TO ACTUAL COMPARISON 1993 - 1997 AND 1998 BUDGET (CASH BASIS)

(amounts expressed in thousands)

| | 19 | 93 | 19 | 94 | 19 | 95 | 19 | 96 | 19 | 997 | 1998 |
|--|----------|----------|----------|----------|----------|----------|----------|-----------|----------|-----------|------------|
| | Budget | Actual | Budget | Actual | Budget | Actual | Budget | Actual | Budget | Actual | Budget |
| BEGINNING CASH & INVESTMENTS | \$73,445 | \$72,784 | \$66,705 | \$64,916 | \$71,085 | \$73,155 | \$71,652 | \$69,791 | \$85,011 | \$ 84,727 | \$ 125,385 |
| RECEIPTS FROM: | | | | | | | | | | | |
| Sale of water | 82,200 | 81,635 | 86,000 | 98,132 3 | 96,800 | 93,361 6 | 110,970 | 114,782 7 | 115,500 | 123,005 9 | 124,502 |
| Nonoperating, interest & other | 13,435 | 13,687 | 8,510 | 10,573 | 12,520 | 9,942 | 12,003 | 10,421 | 13,915 | 16,113 | 14,156 |
| System development charges | 9,780 | 12,229 | 11,760 | 13,596 | 11,800 | 15,660 | 14,100 | 15,280 | 14,290 | 45,092 10 | 19,200 |
| Developer participation (new facilities) | 1,150 | 1,539 | 1,520 | 2,884 | 2,300 | 3,930 | 5,330 | 3,050 | 3,350 | 3,731 | 3,733 |
| Reimbursements & grants | 4,420 | 5,841 | 1,490 | 2,419 | 1,005 | 258 | 710 | 498 | 650 | 113 | 96 |
| Subtotal | 110,985 | 114,931 | 109,280 | 127,604 | 124,425 | 123,151 | 143,113 | 144,031 | 147,705 | 188,054 | 161,687 |
| Sale of bonds | 16,400 | 16,561 | 16,450 | 18,063 | 17,000 | 12,720 | 16,975 | 16,836 | 19,530 | 19,644 | - |
| Total receipts | 127,385 | 131,492 | 125,730 | 145,667 | 141,425 | 135,871 | 160,088 | 160,867 | 167,235 | 207,698 | 161,687 |
| LESS EXPENDITURES FOR: | | | | | | | | | | | |
| Operations, maintenance & refunds | 56,519 | 60,047 2 | 60,350 | 65,156 4 | 65,217 | 67,127 | 70,534 | 72,484 | 71,201 | 72,066 | 70,495 |
| Debt service | 32,846 | 31,161 | 31,799 | 37,130 | 41,885 | 39,840 | 43,049 | 42,463 | 43,950 | 43,905 | 48,553 |
| Subtotal | 89,365 | 91,208 | 92,149 | 102,286 | 107,102 | 106,967 | 113,583 | 114,947 | 115,151 | 115,971 | 119,048 |
| Capital improvements (new facilities) | 16,783 | 17,977 | 18,074 | 10,017 5 | 9,043 | 7,036 | 8,080 | 3,473 | 24,328 | 19,029 | 30,264 |
| System replacements | 21,690 | 17,272 | 20,834 | 14,785 | 15,333 | 14,098 | 19,868 | 15,294 | 9,286 | 8,109 | 12,316 |
| Equipment | 4,908 | 4,229 | 4,128 | 3,340 | 3,772 | 4,006 | 5,694 | 5,209 | 4,544 | 5,477 | 7,083 |
| Subtotal | 43,381 | 39,478 | 43,036 | 28,142 | 28,148 | 25,140 | 33,642 | 23,976 8 | 38,158 | 32,615 | 49,663 |
| Indirects to capital | 11,000 | 8,674 | 9,040 | 7,000 | 8,700 | 7,128 | 7,600 | 7,008 | 8,128 | 8,093 | 8,200 |
| Total expenditures | 143,746 | 139,360 | 144,225 | 137,428 | 143,950 | 139,235 | 154,825 | 145,931 | 161,437 | 156,679 | 176,911 |
| ENDING CASH & INVESTMENTS ¹ | \$57,084 | \$64,916 | \$48,210 | \$73,155 | \$68,560 | \$69,791 | \$76,915 | \$84,727 | \$90,809 | \$135,746 | \$ 110,161 |

General explanation of variances:

Variances in operating receipts are generally due to abnormal climatic conditions.

Variances in system development charges are generally related to levels of activity in the home building industry.

Variances in capital improvements are generally due to changes in project scheduling.

¹Due to the veto of the Two Forks Reservoir project, the cash reserves, which had been accumulated for the project, were deliberately reduced beginning in 1990 and for the next 3 years.

²Difference between 1993 budget and actual operating and maintenance is due to lower indirect costs assigned to capital than budgeted.

³1994 operating receipts increase was due to a 4.5% rate increase effective June 1, 1994, and a substantial increase in consumption resulting from an unusually hot dry summer.

⁴1994 actual O&M indirects to capital were \$2.0 million less than budgeted. Also includes \$560,000 unbudgeted sick leave payout.

⁵1994 new facilities capital expenditures were under budget primarily due to delay associated with the construction of several conduits.

⁶1995 Operating Receipts were under budget by \$3.5 million due to unusually wet weather during the summer months.

⁷1996 Operating Receipts were over budget by \$3.8 million due to high consumption levels in June, September & October.

⁸Capital projects under ran by \$9.7 million in 1996 primarily due to rescheduling several construction projects to 1997.

⁹¹⁹⁹⁷ Operating Receipts were over budget by \$7.5 million due to an increase in billings for October and the City & County of Denver paying past due amounts and converting to a monthly basis.

¹⁰1997 System Development Charges were over \$30.8 million due to substantial continued growth in the housing market, unbudgeted amounts of \$22.9 million from South Adams County, \$963,000 from the City of Arvada, and \$1.2 million from Araphoe Estates Water District.

¹¹¹⁹⁹⁸ Capital Budget - this high level of expenditure reflects acquisition of gravel pit storage at \$4.1 million, updates and improvements to the treatment plants to comply with Federal and State regulations of \$13.3 million, construction of the Colorow and Chatfield Reservoir totaling \$3.7 million, the low-side addition to Chatfield Pump Station at \$2.4 million, construction of Conduit 74, phase 3 and 4, totaling \$4.7 million, and purchase of new computer systems at \$2.1 million.